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Vol. XXXVIII.] **[Part I.**

JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1875.

The Consumption *of* Intoxicating Liquors *at* Various Periods *as* Affected *by the* Rates *of* Duty Imposed *upon them. By the* Rev. Dawson Burns, M.A., *Metropolitan Superintendent of the United Kingdom Alliance.*

[Read before the Statistical Society, 19th January, 1875.]

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Few persons, if any, would broadly maintain that the consumption of intoxicating liquors has never been influenced by the taxation imposed on the articles themselves, or on the raw material from which, by chemical transformation, they have been produced. If cheapness stimulates purchase, and if taxation tends to dearness, it would seem to follow, beyond contradiction, that the duties levied on various kinds of alcoholic liquors have diminished their common use; yet this deduction does not apparently pass unchallenged, since it is affirmed by the official organ of a body of financial reformers, that drunkenness will be diminished when taxation on alcoholic liquors is abolished, and when (for so it is singularly said) "drink "ceases to be a rarity and luxury."

An inquiry of this kind will be productive of at least one good result, if it helps to dissipate the error, every now and then propagated by members of the public press, that the system of taxing intoxicating liquors and their sellers, is identical with the system under which their sale is confined to licensed persons. This confusion may have arisen from the circumstance, that licences have long been paid for, but it is forgotten that payment, though necessary, could be made by those only who had previously received a legal permission to sell. The magisterial document conveying this permission was at the first, and continued down to 1810, to be styled the licence, but justices' licences were never taxed, and it was one of the charges preferred against Sir Giles Mompesson, in the time of James I, that, under the patent granted to him by the king, he sold licences to persons who had never applied to the justices of the peace, or had been refused. It will be useful, therefore, to remember that magistrates' licences or certificates have been essential since 1552 to a legal sale of liquor in public houses; that they have been granted or withheld at the justices' discretion; and that when granted, they have been issued gratuitously, with the exception of a small fee to the justices' clerks; but that the taxation of fermented and distilled liquors does not go back farther than the Long Parliament, and was revived at the Restoration. The taxation of licensed vendors was of still later introduction.

Speaking generally, and subject to some temporary departures from the rule, it may be said, that licensing the sale of intoxicating liquors has professedly been controlled with a view to moral and social objects, but that the taxation of liquors has been regulated by fiscal considerations. The magistrates have been supposed to guard the public morals; the officers of customs and excise to secure the public revenue. At the same time, the effect of changes of taxation on the ratio of consumption, is an interesting question, whether the effect has been designed or not; and to ascertain the measure of this effect is the object of this paper.

Such an inquiry might, through inadvertence, be made to yield exceedingly erroneous conclusions. Statistics are one thing, and the application of them another; and it is in forgetfulness of this distinction that statistics are often said to be produceable in support of any theory. But, facts of all kinds, whether presented statistically or otherwise, may be misapplied, and false inferences extracted from them, simply because other and qualifying facts are not taken into account. There is, for example, in this present inquiry, a disturbing factor of great force in the prevalence of illicit manufacture of liquors, and the extensive smuggling of foreign spirits down to comparatively recent times; and it would consequently be unfair to take the official figures as a certain standard of the national consumption at widely different times. The disturbing power of this factor diminishes as we approach our own day, and it can have very inconsiderably modified the results of taxation during the last thirty years as they are presented in the official returns.

I. It will be best to take each country of the United Kingdom separately as to the consumption of liquors made and retained for use within them.

First, we would speak of England in regard to malt, and beer, and ardent spirits.

1. The tax on malt was first imposed 20th April, 1697, and has been regulated by a succession of Acts of Parliament, ten of which are partially or wholly in force, besides thirteen others passed in the present reign, for regulating the manufacture of malt and the collection of the tax. The annual returns begin with 1702, when the quantity charged with duty was 12,166,778 bushels, but this sum was certainly defective, the average for the next five years being 23,633,095 bushels. The duty was $6\frac{16}{21}d$. As the century advanced the amount charged gradually but slowly increased until 1760, when the duty was raised to $9\frac{1}{4}\frac{2}{21}d$. This rise of the duty exercised some influence upon consumption, for the annual average of ten years before the rise was 25,600,000; and of ten years after the rise 24,600,000 bushels. In 1780 the duty was raised to 1*s*. 4½*d*., in which year the bushels charged were 30,805,100. The average of the next ten years was just under 25,000,000 bushels. The malt tax afterwards was looked to for supplying some of the sinews of war in the struggle against Buonaparte. In 1802 it was raised to 2*s*. 5*d*., and in 1804 to 4*s*. 5¾*d*., at which point it stood till 1816. From 1805 to 1815 inclusive, the average annual consumption, despite the increase of population, was less than 24,000,000 bushels. For the next few years the tax fluctuated from 2*s*. 5*d*. to 3*s*. 7¼*d*., sinking to 2*s*. 7*d*. in 1832, at which it stood till 15th May 1840, when an additional 5 per cent. was added. The reduction of duty had been followed by a rise in the quantity charged. The average consumption per annum from 1823 to 1829 inclusive, was 26,900,000 bushels. In 1830 the beer duty was taken off, by which the revenue lost about 3½ millions per annum. This co-operated, with the lower malt tax, and the Beer Act of 1830, to increase the consumption of malt, which, during the ten years 1831-40, stood at the annual average of 34,300,000 bushels. From causes independent of the duty, the average fell considerably during the next nine years, and though in 1853 the quantity exceeded 36,000,000 bushels, the rise of duty to 4*s*. effected a great reduction in the amount charged, which was slightly assisted by a change of the law, 14th August, 1855, relieving malt of all duty when used for distilling; but a return to the 2*s*. 7*d*. and 5 per cent. duty, helped to increase the consumption. From 1858 to 1867 the average quantity charged

duty was nearly 41,000,000 bushels (40,900,000), and the average has since increased to upwards of 50,000,000, a greater consumption of beer having engrossed a large portion of the augmented wages of the working classes during the recent years of commercial prosperity.

2. Turning to home-made spirits, we can trace in England the effect upon consumption of the rates of duty imposed at various times. For centuries after the discovery of spirit of wine it was treated as a medicine under the peculiar misnomer of *aqua vitæ*, and was dispensed by the apothecary as a drug, marvellously potent, but demanding much care in its judicious appropriation. Doubtless the medicine proved seductive, and was often resorted to for the cure of maladies either more imaginary than real, or which it was more calculated to aggravate than to assuage. But it does not appear to have become an article of ordinary traffic until after the Restoration; and though a tax was then imposed of 2*d.*, 3*d.*, and 4*d.* per gallon, according to the material used in its production, there is no official record of the amount paying duty till 1684, when the return is 527,492 gallons, producing a gross revenue of 7,366*l.* 7*s.* 11*d.* In 1690 the tax rose from 4*d.* to 8*d.*, but it was the unfortunate policy of King William III, and his administration, to benefit agriculture, as they thought, by encouraging distillation and excluding the sale of ardent spirits from the magisterial restraint imposed on alehouses and taverns. The duty itself was lowered in 1691 to 2*d.* and 4*d.*, and as the same ill-judged policy found equal favour with Queen Anne's advisers, the growing appetite for "strong waters," as they were technically called, made itself evident in the fast extending consumption. During the seven years from 1684 to 1690 inclusive, the average annual quantity charged duty was 539,868 gallons, but in the eighteen following years (1691-1708) the average annual consumption was doubled, having risen to 1,155,063 gallons, though the population had but slightly increased. In 1709 the duty was put at 3*d.* and 6*d.*, but no check on consumption was thereby applied. In 1710 the quantity charged was 2,200,721 gallons; in 1728 it stood at 4,792,705 gallons; and in 1735 it had mounted to 6,440,454 gallons. The following year the celebrated Gin Act came into force at Michaelmas, by which a 50*l.* tax was imposed on all licences to sell in quantities less than two gallons, and an additional duty of 20*s.* on every gallon actually retailed. The failure of this Act, with its subsequent repeal, has been a stock illustration in opposition to proposed legislation of a strongly restrictive or prohibitory character. But a full understanding of the case would show that nothing could be more unfair than such a construction of the facts. The popular taste for gin, and indulgence in it, had been stimulated to such a degree by pre-

vious legislation, that we need not wonder at the failure to effect a sudden and radical change; especially when we consider that the duty was laid on actual sale and not at the still-head, and when we are aware of the inefficiency of police arrangements for the law's execution. But that this much-abused Act was not without some influence on consumption may be inferred from the fall of the quantity charged duty to 6,116,473 gallons in 1736, and to 4,250,399 in 1737. Even in 1738-39 the aggregate quantity charged was 11,202,510 as compared with 12,515,016 in 1734-35, before the Act was passed. In 1743-45 the duties were 3*d.*, 6*d.*, and 1*s.*; and in 1746-50 7½*d.* and 1*s.* 1*d.*, the increase of the tax exerting a sensible effect on the consumption. This effect became more visible when the duties were placed at 1*s.* and 1*s.* 3*d.* in 1752-58. Taking the five years, 1752-56, the average consumption fell to less than 6,800,000 gallons, though it had stood at 7,049,822 in 1751. The Parliament of 1757 prohibited the manufacture of spirits from grain, meal, and flour; and when the prohibition was removed the duty was raised to 2*s.* 3*d.* and 2*s.* 6*d.*, afterwards to 2*s.* 9*d.* from 1762 to 1778. During this period the gallons paying duty were, on the annual average, under two millions and a half, and any upward tendency was checked by the raising of the duty to 5*s.* 1½*d.* and 5 per cent., then 10 per cent., and 15 per cent. in quick succession. In 1786 the 2*s.* 7½*d.* duty was resumed, and the gallons charged rose from 2,742,821 in 1785 to 3,694,698 in 1786. From 1787 to 1795 the duties varied from 3*s.* 2*d.* to 3*s.* 4¼*d.*, 3*s.* 10¾*d.*, and 4*s.* 4½*d.*, the consumption continuing to rise; but in 1796 the prohibition of distillation from corn was renewed, and in that year the quantity charged duty was but 300,627 gallons, and in 1797 it was 2,808,948 gallons. It is matter of history that, during both these periods, when the materials of distillation were restricted, the comforts and welfare of the bulk of the people visibly increased. Between 1797 and 1803 the duty rose to 4*s.* 10¼*d.*, to 5*s.* 4¼*d.*, and to 8*s.* –½*d.*, at which it stood till 1811, when it was raised to 10*s.* 2¾*d.* The accounts show that a repressive effect on consumption was exerted by this increase of duty, so that in the seven years from 1804 to 1810 the average annual quantity charged was 4,500,000 gallons. From 1811 to 1818 the duty was 10*s.* 2¾*d.*, and in 1819 was raised to 11*s.* 8¼*d.*, at which it continued till 1825, when the consumption is given at 3,684,049 gallons; but in 1821 a select committee on illicit distillation in Scotland had received evidence of its great prevalence in that country, and the duty which had stood at 6*s.* 2*d.*, was lowered in 1823 to 2*s.* 4¾*d.* The influence of this policy was felt in England, resulting in 1826 in the lowering of the duty from 11*s.* 8¼*d.* to 7*s.* That the consumption was greatly stimulated by this change is indisputable, after making eervy reasonable allowance for illicit manufacture under the higher duty; for the quantity charged in the four years 1826-29 was 7,400,000 gallons, as compared with a trifle over 4,000,000 in the four years 1822-25. In 1830 there was a rise to 7*s.* 6*d.*, continuing till 1839, when it was put at 7*s.* 10*d.*, and so remained till 1856, when it became 8*s.*; in 1860 8*s.* 1*d.*; and in 1861 10*s.*, at which it now remains. The transition from 8*s.* to 10*s.* reduced the consumption, but the wonderful manufacturing and commercial development of the last few years has virtually operated as a reduction of duty and price, so that the consumption of British spirits in England, which was 11,401,901 in 1869, rose to 15,851,906 in 1873.

It is needless to extend to the returns for Scotland and Ireland an analysis as minute as the foregoing, since the extensiveness of illicit distillation, until of late years, would vitiate, or at least render dubious, any conclusions drawn from the official accounts. But a fair test is offered in regard to both countries by the transition from a lower to a higer rate of duty commencing in 1853 and ending in 1861. As regards Scotland, from 1841 to 1852, twelve years, the duty was 3*s.* 8*d.*, and the average annual quantity charged was about 6,000,000 gallons. During the last five years of that term it was 7,000,000, but in 1853 the duty was raised to 4*s.* 8*d.*, and by various gradations to 10*s.* in 1861. During the whole of this time the quantity charged had been rapidly falling, until the annual average was less than five and a half millions. It subsequently fell below five millions. Similar causes to those operating in England have tended to increase consumption, the gallons charged duty in 1873 being 6,832,487; an increase of a million and a half over 1869, but less by 300,000 than the quantity charged in 1852. The Forbes Mackenzie Act, which came into force in May, 1854, may claim credit for some portion of this reduction, as it suppressed all legal sale of liquor throughout Scotland from 11 o'clock on Saturday night to 6 or 7 on Monday morning. But the co-ordinate effect of the higher duty cannot be doubted; and if any hesitation were possible on this point it would be removed by the case of Ireland, where a succession of rises in the duty resulted in lowering the quantity charged from 8,208,256 in 1853, when the duty was 2*s.* 8*d.*, to 3,891,759 in the year ending 31st March, 1863, when the duty of 10*s.* had been in force two years. In Ireland, as in England and Scotland, the consumption has again increased, and in 1873 was 6,224,108 gallons, but even this was two millions below the consumption in 1852, the last year under the low duty.

II. The fiscal changes in regard to foreign spirits and wines, affecting the United Kingdom as a whole, contribute further evidence that rates of duty exercise a potent influence on the increased or diminished consumption of intoxicating liquors.

Prior to 1863 the rate of duty on foreign rum, brandy, and geneva was 15*s.* a-gallon. This duty was lowered to 10*s.* 5*d.* from 16th July of that year. The effect on imports of rum was not very striking for a number of years, since the principal supplies are drawn from our own colonies, but the quantity retained for consumption rose from 3,575,139 gallons in 1859 to 4,404,667 in 1872, and to 5,027,321 in 1873; this last being an increase of 40 per cent. over 1859. The increased consumption of foreign brandy and other spirits was much more rapid, so that while the gallons charged duty in 1858 were 1,155,274, and in 1859 were 1,359,509, they rose to 1,741,686 in 1861, and the annual average for the last three years, 1871-73, has been 4,884,876 gallons; an increase of upwards of 300 per cent. on the annual average before the reduction of the duty.

In regard to the wine duties, the hope of a much larger consumption was the avowed motive of the reduction from 5*s.* $9\frac{3}{10}$*d.* to a 1*s.* duty on wine containing less than 18 per cent., almost immediately altered to 26° as the proper limit in natural wines of proof spirit, and to half the old duty on wines more highly alcoholic, but not exceeding 42° of proof spirit. The object of Mr. Gladstone was to induce a popular consumption of light wines, but though a taste for clarets has been partially excited, the consumption of the stronger wines of Spain and Portugal has been stimulated in a great degree. During the three years, 1858-60, the average annual consumption of all foreign wines was just upon 6,600,000 gallons, but in the three years, 1863-65, the annual average rose to 11,270,000 gallons, and in the last three years the average has been 16,938,473, an increase of 150 per cent. upon the average of 1858-60. An analysis of the quantities entered for home consumption in 1873, shows that while France forwarded 5,714,030 gallons, of which 4,099,704 were red, Portugal and Spain supplied 10,566,244 gallons, leaving to other countries 1,746,830 gallons, whose alcoholic strength was little lower than that of the sherries and ports of the Iberian Peninsula. The course of commerce in this respect has given proof that the most plausible prognostications are sometimes falsified, and experience has rudely confuted the theory, that light wines, if cheap, would enter into common consumption, and, by helping to drive out the stronger liquors, would assist the much needed work of promoting our national sobriety.

I have before remarked, that fiscal changes have generally had for their object purely fiscal ends, while the regulation of licences has been conducted, professedly, at least, with a view to moral results. Exceptions on both sides, however, have not been wanting. A regard to property, rather than morality, has in many cases guided decisions as to the granting and withholding of licences;

and, on the other hand, the notable case of 1736 and some more recent occasions, have evinced a desire to subordinate considerations of revenue to the promotion of social purity and protection. Scarcely a Chancellor of the Exchequer has touched of late years upon the spirit duties, without expressing a wish that the income derived from them might be diminished rather than augmented. It is quite evident—and the fact indicates a change of mind not limited to the advocates of any particular policy on the licensing question—that any reduction of the duties on intoxicating liquors, which would tend to increase their consumption, would, by the public, be very unfavourably received. It is the force of this sentiment as much as the difficulty of finding a substitute, which explains the failure of all attempts to excite a popular feeling in support of a repeal of the malt tax. The repeal of that tax could only benefit, if at all, the agricultural interest, by greatly increasing the consumption of beer; and there is a very general conviction abroad, that the drinking of less beer rather than of more, would be a blessing to the State. It has virtually passed into an understanding among our statesmen, that the taxation of alcoholic liquors is specially justifiable, and to be maintained, because of the restraint thereby imposed on consumption; but if so, nothing can be more unreasonable than to demand that the duty on malt, which is really a beer tax, shall be repealed, while a pint of malt liquor pays but a farthing duty, and a glass of gin pays six times as much, or 1½*d.* On the other hand, it cannot be disguised that the taxation of intoxicating liquors is regarded with disfavour, not only by the advocates of direct taxation, but by a much larger and more influential body of persons, who see in a revenue thus raised a powerful, if unacknowledged, influence continually acting on the Government of the day, so as to render it opposed to measures by which the consumption of those drinks might be largely reduced throughout the nation. Cowper, in his "Task," roundly charged the excise officials of his age with thinking of nothing but getting as much money as possible out of the duties on liquor, careless of the "excess of riot" bred by the consumption of the drink; and it is not uncharitable to suppose, that in the endeavour to show a financial surplus, or at least maintain the financial equilibrium, a bias should be contracted by the Government against proposals whose immediate effect would be of a contrary kind, however salutary their remoter influence on social industry and the springs of national wealth. The problem is a difficult one; for why relinquish, or largely diminish, a prolific and easily collected source of revenue, which undoubtedly restrains drinking, and thereby prevents the evil that still greater drinking would entail, unless some reforms could be secured by which, in other ways, an amount of good would be obtained, equal both to the loss of the revenue and the check exercised on intemperate indulgence? It is unquestionably a serious obligation, resting on our statesmen, not to allow a desire of revenue to incline them against measures of great social utility. This duty was unequivocally acknowledged by Mr. Gladstone in 1860, though just prior to the reduction of the duties on foreign spirits and wine; and it has been again more forcibly stated by the present Chancellor of the Exchequer in his Budget speech of 16th April, when discussing the possibility of a reduced consumption of spirits. He then said: "This must be from one of two causes, either from some failure in "the ability of the people to purchase spirits, the will remaining as "it was, or from some great change in the habits of the people "inducing them to abandon the use of such enormous quantities of "ardent spirits. If a reduction of the revenue were due to increasing habits of temperance and abstinence from the use of ardent "spirits, I venture to say that the amount of wealth such a change "would bring to the nation, would utterly throw into the shade the "amount of revenue now derived from the spirit duty, and not only "should we see with satisfaction a diminution of the revenue from "such a cause, but we should find in various ways that the "exchequer would not suffer from the losses which it would sustain "in that direction." If this language, which was loudly cheered, correctly interprets the policy which our statesmen will loyally carry out, and if the *auri sacra fames* does not seize upon them and blind them to the duty of assisting all practical measures for discouraging drinking habits, the country will have to congratulate itself upon the change. For while, as our inquiry has shown, fiscal duties do diminish the consumption of intoxicating liquors, it is none the less incumbent upon the men who are placed at the helm of our affairs, to be willing to resign any portion of revenue derived from this source when, by the resignation, the public interests will not be impaired, but rather more firmly upheld, because resting upon the basis of a broader public intelligence and a deeper public virtue.

APPENDIX.

MALT I.

Returns showing the Quantities Charged Duty in England, with Rates of Duty from 1697 *to* 1853, *and afterwards the Years ending* 31*st March,* 1855 *to* 1869 *inclusive.*

Year (Commenced 20th April, 1697).	England.		Year.	England.	
	Number of Bushels Charged with Duty.	Rate of Duty per Bushel.		Number of Bushels Charged with Duty.	Rate of Duty per Bushel.
1697	No account of Quantities can be rendered for this period	$6\frac{1}{3}\frac{4}{7}$*d.*	1737	24,491,366	$6\frac{1}{3}\frac{4}{7}$*d.*
'98			'38	26,145,413	
'99			'39	26,716,197	
1700			'40	22,074,674	
'01			'41	20,141,254	
1702	12,166,778		1742	25,879,389	
'03	26,754,505		'43	26,298,391	
'04	19,765,042		'44	31,776,789	
'05	27,120,982		'45	24,917,869	
'06	23,099,630		'46	23,955,350	
1707	25,002,855		1747	24,886,567	
'08	23,209,966		'48	26,422,650	
'09	20,275,335		'49 ..	24,966,250	
'10	19,671,021		'50 ...	29,284,786	
'11	22,263,126		'51	26,994,880	
1712	22,313,483		1752	24,280,058	
'13	25,060,639		'53 ...	25,240,816	
'14	20,019,767		'54	27,347,890	
'15	24,472,610		'55	27,916,402	
'16	26,643,119		'56	24,120,284	
1717	28,859,926		1757 .	17,640,926	
'18	26,862,157		'58 ...	25,027,614	
'19	28,228,627		'59	28,090,252	
'20	25,625,844		1760	27,810,971	$6\frac{1}{3}\frac{4}{7}$*d.*; $9\frac{1}{4}\frac{2}{21}$*d.*
'21	28,587,891		1761	28,928,960	$9\frac{1}{4}\frac{2}{21}$*d.*
1722	32,999,688		'62	25,951,676	
'23	30,655,498		'63 ...	19,557,812	
'24	24,227,667		'64	26,331,702	
'25	27,265,172		1765	25,631,086	
'26	27,016,303		'66	20,823,576	
1727 ...	25,401,576		'67	21,894,498	
'28	20,951,269		'68	27,124,938	
'29	23,032,216		'69	26,546,052	
'30	28,410,421		'70	24,452,960	
'31	25,833,240		'71 ...	21,961,057	
1732	26,980,568		'72	27,538,150	
'33	29,795,100		'73	21,467,926	
'34	27,087,437		'74	23,949,905	
'35	25,494,686		'75	24,967,360	
'36	23,661,561		'76	23,336,298	

MALT I—*Contd.*

Returns showing the Quantities Charged Duty in England—Contd.

Year.	England.		Year.	England.	
	Number of Bushels Charged with Duty.	Rate of Duty per Bushel.		Number of Bushels Charged with Duty.	Rate of Duty per Bushel.
1777	25,814,436	9¼$\frac{2}{21}$*d.*	1816	21,158,348	4*s.* 5¾*d.*; 2*s.* 5*d.*
'78	20,318,736		1817	20,855,566	2*s.* 5*d.*
1779	26,273,405	9¼$\frac{2}{21}$*d.*; 9½$\frac{4}{5}$*d.*	'18	24,629,838	
'80	30,805,100	9½$\frac{4}{5}$*d.*; 1*s.* 4¼*d.*	1819	22,612,290 Stock in hand	2*s.* 5*d.*; 3*s.* 7¼*d.*
1781	26,718,048	1*s.* 4¼*d.*	1820	23,884,242	3*s.* 7*d.*
'82	27,159,104		'21	26,138,437	
'83	16,712,114		1822	26,688,512	3*s.* 7¼*d.*; 2*s.* 7*d.*
'84	25,796,105		1823	24,845,152	2*s.* 7*d.* and 5 per cent. additional from 15th May, 1840.
'85	26,269,439		'24	27,615,383	
'86	22,074,334		'25	29,572,741	
'87	26,439,578		'26	27,335,971	
'88	26,048,072		'27	25,096,337	
'89	23,509,592		1828	30,517,819	
'90	21,976,959		'29	23,428,135	
1791	27,070,363 Stock in hand	1*s.* 4¼*d.*; 1*s.* 7¼*d.*	'30	26,900,902	
1792	27,789,166	1*s.* 7¼*d.*; 1*s.* 4¼*d.*	'31	32,963,470	
1793	23,706,765	1*s.* 4¼*d.*	'32	31,669,771	
'94	24,813,341		1833	33,789,010	
'95	23,960,822		'34	34,449,646	
'96	27,282,973		'35	36,078,856	
'97	29,979,110		'36	37,196,997	
'98	26,143,432		'37	33,692,357	
'99	30,805,822		1838	33,823,985	
1800	14,049,749		'39	33,826,016	
'01	18,005,786		'40	36,653,442	
1802	29,432,584 Stock in hand	1*s.* 4¼*d.*; 2*s.* 5*d.*	'41	30,956,394	
1803	29,562,038	2*s.* 5*d.*	'42	30,796,262	
1804	21,854,111 Stock in hand	2*s.* 5*d.*; 4*s.* 5¾*d.*	1843	30,891,002	
1805	21,665,204	4*s.* 5¾*d.*	'44	31,856,551	
'06	26,652,425		'45	30,508,840	
'07	24,158,843		'46	35,723,774	
'08	21,726,415		'47	30,269,965	
'09	22,120,984		1848	31,848,456	
'10	23,546,346		'49	33,161,128	
'11	25,982,749		'50	34,423,490	
'12	18,092,965		'51	34,638,214	
'13	21,701,356		'52	35,483,623	
'14	25,320,615		1853	36,245,847	
'15	26,246,795				

MALT I—*Contd.*

Returns showing the Quantities Charged Duty in England—Contd.

Year ending 31st March.	England.		Year ending 31st March.	England.	
	Number of Bushels Charged with Duty.	Rate of Duty per Bushel.		Number of Bushels Charged with Duty.	Rate of Duty per Bushel.
1855	30,576,595 Stock in hand	2*s.* 7*d.* and 5 per cent. additional; —4*s.*	1858	38,015,619	2*s.* 7*d.* and 5 per cent. additional.
			'59	39,094,653	
			'60	40,715,457	
			'61	33,692,788	
			'62	41,314,218	
1856	30,702,947	4*s.*	'63	37,425,456	
			'64	43,569,186	
			'65	43,955,940	
1857	36,313,926	4*s.*; 2*s.* 7*d.*, and 5 per cent. additional.	'66	45,190,369	
			'67	45,982,399	
			'68	43,608,570	
			'69	44,387,259	

MALT II.

The foregoing statistics are taken from the "Report of the Commissioners of Inland Revenue on the Duties under their Management, 1870," vol. ii. For the sake of continuity the returns for the Solar Years, from 1854-73 inclusive, are appended from other official documents.

Year.	Number of Bushels charged with Duty.	Rate of Duty per Bushel.
1854...............	31,868,978	2*s.* 7*d.* with 5 per cent. additional; 4*s.*
'55*	30,199,820	4*s.*
'56...............	35,439,475	4*s.*, 2*s.* 7*d.* and 5 per cent. additional.
'57...............	37,262,564	2*s.* 7*d.* and 5 per cent. additional.
'58...............	38,073,109	,,
'59...............	40,406,447	,,
'60...............	35,380,344	,,
'61...............	39,958,082	,,
'62..............	37,379,253	,,
'63...............	42,087,482	,,
'64..............	43,975,530	,,
'65...............	44,168,628	,,
'66...............	47,263,665	,,
'67...............	43,158,542	,,
'68...............	44,616,505	,,
'69...............	44,315,390	,,
'70...............	47,455,346	,,
'71...............	45,206,179	,,
'72...............	51,600,809	,,
'73...............	52,828,692	,,

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* Since 14th August, 1855, malt has been made duty free for distillery purposes, under the provisions of the Act 18th and 19th Vict., cap. 94.

BRITISH SPIRITS (ENGLAND), I.

Showing the Gallons of British Spirits Charged Duty in England, with Rates of Duty, and Amounts of Duty from 1660 *to* 1853, *and afterwards the Years ending the* 31*st of March*, 1855 *to* 1869, *inclusive.*

Year.	Population.	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Amount of Duty.
				£ *s.* *d.*
1660....	—	No record prior to the year 1684.	2*d.*, 3*d.*, and 4*d.*, according to the material from which made.	No record prior to the year 1684.
'61....	5,547,840			
'62....	—			
'63....	—			
'64....	—			
'65....	—			
'66....	—			
'67....	—			
'68....	—			
'69....	—			
'70....	—			
'71....	5,630,316			
'72....	—			
'73....	—			
'74....	—			
'75....	—			
'76....	—			
'77....	—			
'78....	—			
'79....	—			
'80....	—			
'81....	5,714,020			
'82....	—			
'83....	—			
				London Gross Produce.
1684....	—	527,492		7,366 7 11
'85....	—	593,645		7,591 1 8
'86....	—	468,187		6,362 11 9
'87....	—	516,408		7,054 14 6
'88....	—	559,416		7,940 11 6
'89....	—	570,154		8,008 1 8
1690....	—	543,782	4*d.*–8*d.*	13,537 10 8
1691....	5,798,967	659,131	2*d.*–4*d.*	15,948 10 8
'92....	—	849,373		19,544 10 6
'93....	—	948,376		19,664 16 6
'94....	—	810,096		14,315 12 11
				Total Gross Produce.
1695....	—	967,802		24,621 10 8

BRITISH SPIRITS (ENGLAND), I—*Contd.*

Showing the Gallons of British Spirits Charged Duty in England—Contd.

Year.	Population	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Amount of Duty.		
				£	*s.*	*d.*
1696....	—	1,103,501	2*d.*–4*d.*	25,864	11	11
'97....	—	828,144		20,200	4	2
'98....	—	845,717		23,408	3	9
'99....	—	877,085		27,521	–	5
1700....	—	1,232,514		33,378	13	–
'01....	5,885,177	1,270,753		28,997	14	9
'02....	—	1,073,015		24,259	–	1
'03....	—	1,146,171		25,212	1	–
'04....	—	1,375,496		30,295	17	10
'05....	—	1,438,162		32,462	8	5
'06....	—	1,674,728		37,084	1	2
'07....	—	1,973,790		43,263	1	2
'08 ...	—	1,717,276		39,160	17	6
1709....	—	1,738,067	3*d.*–6*d.*	37,956	8	5
'10....	—	2,200,721		54,656	6	3
'11....	5,972,670	2,233,143		63,725	18	5
'12....	—	2,066,604		58,097	17	6
'13....	—	2,048,851		54,342	3	6
'14....	—	1,950,827		53,991	2	5
'15....	—	2,265,657		62,283	2	–
'16....	—	2,381,134		64,487	–	10
'17....	—	2,595,548		69,220	18	11
'18....	—	2,417,816		63,699	17	3
'19....	—	2,463,995		61,286	18	4
'20....	—	2,483,166		62,597	–	5
'21...	6,061,462	2,792,659		73,170	–	5
'22....	—	3,379,695		85,804	7	8
'23....	—	3,702,700		93,130	3	8
'24....	—	3,563,625		89,735	11	7
'25....	—	3,925,556		98,511	3	6
'26....	—	3,980,591		100,280	17	4
'27....	—	4,612,275		115,825	–	9
'28....	—	4,792,705		118,966	10	11
'29....	—	4,727,680		116,169	6	–
'30....	—	3,777,631		99,833	4	2
'31....	6,151,573	4,333,899		110,814	12	9
'32....	—	4,373,825		111,662	10	4
'33....	—	4,824,227		121,263	1	10
'34....	—	6,074,562		151,657	12	5
'35....	—	6,440,454		154,949	16	7
'36....	—	6,116,473		149,736	7	5
'37....	—	4,250,399		101,846	10	8
'38....	—	5,438,964		127,116	9	10
'39....	—	5,763,546		138,918	5	9
'40....	—	6,650,618		156,709	19	8
'41....	6,243,026	7,439,230		172,625	4	6

BRITISH SPIRITS (ENGLAND), I—*Contd.*

Showing the Gallons of British Spirits Charged Duty in England—Contd.

Year.	Population.	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Amount of Duty.		
				£	s.	d.
1742....	—	7,954,690	3*d.*—6*d.*	178,813	10	2
1743....	—	8,208,430	3*d.*—6*d.*—1*s.*	218,626	12	8
'44....	—	6,627,494		274,591	–	–
'45....	—	7,200,242		303,126	19	3
1746....	—	6,865,036	7½*d.*—1*s.* 3*d.*	301,130	8	9
'47....	—	7,310,081		371,640	6	5
'48....	—	7,082,115		356,838	3	10
'49....	—	6,670,570		338,502	10	8
'50....	—	6,613,071		334,874	15	4
'51....	6,355,840	7,049,822		357,122	13	3
1752....	—	4,483,341	1*s.*—1*s.* 3*d.*	350,652	3	8
'53....	—	4,868,996		384,690	3	3
'54....	—	5,051,002		400,060	7	6
'55....	—	4,652,477		367,016	8	11
'56....	—	4,678,658		369,259	18	1
'57....	—	3,713,835		301,949	–	5
'58....	—	1,849,370		187,208	8	8
1759...	—	1,819,134	2*s.* 3*d.*—2*s.* 6*d.*	181,886	–	9
'60....	—	2,323,020		292,846	7	7
'61....	6,825,476	3,181,255		581,063	17	5
1762....	—	2,296,308	2*s.* 6*d.*—2*s.* 9*d.*	471,294	12	11
'63....	—	2,272,415		455,960	–	8
'64....	—	2,219,731		446,138	3	7
'65....	—	2,226,830		446,552	2	–
'66....	—	2,430,848		483,668	19	3
'67....	—	2,042,673		413,925	17	3
'68....	—	2,206,515		447,045	5	2
'69....	—	2,549,042		512,686	12	–
'70....	—	2.570,247		513,381	6	7
'71....	7,352,952	2,495,099		497,762	10	1
'72....	—	2,582,808		513,995	17	10
'73....	—	2,223,685		444,677	9	3
'74....	—	2,009,994		400,530	14	5
'75....	—	2,514,876		498,438	–	5
'76....	—	2,518,683		508,138	7	4
'77....	—	2,506,814		497,776	13	–
'78....	—	2,955,636		584,187	14	5

BRITISH SPIRITS (ENGLAND), I—*Contd.*

Showing the Gallons of British Spirits Charged Duty in England—Contd.

Year.	Population.	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Amount of Duty. £	s.	d.
1779....	—	2,638,578	2s. 7½d.—2s. 10½d.	514,796	5	5
1780....	—	2,291,940	5s. 1½d. and 5 per cent.	498,913	15	1
1781....	7,921,192	2,113,884	5s. 1½d. and 10 per cent.	502,504	5	6
'82....	—	1,941,622		461,610	12	11
1783....	—	1,227,992	5s. 1½d. and 15 per cent.	291,925	5	6
'84....	—	1,337,912		317,857	6	7
1785....	—	2,742,821	5s. 1½d. and 15 per cent. —2s. 7½d.	280,267	9	6
1786....	—	3,694,698	2s. 7½d.	371,949	2	–
1787....	—	3,561,477	8s. 2d.	400,176	10	7
'88....	—	3,670,168		500,289	2	–
'89....	—	3,908,830		567,742	–	11
'90....	—	3,858,430		562,294	15	5
1791....	8,533,348	4,072,735	3s. 4¾d.	653,168	11	1
'92....	—	4,544,618		771,415	16	4
'93....	—	4,244,447		720,305	1	3
1794....	—	4,594,793	3s. 4¾d.—3s. 10¾d.	828,488	14	9
'95....	—	4,711,640	3s. 10¾d.—4s. 4½d.	973,765	7	1
'96....	—	800,627	4s. 4½d.	54,718	12	2
'97....	—	2,808,948	4s. 4½d.—4s. 10½d.	672,440	19	9
1798....	—	3,630,872	4s. 10½d.	881,188	15	1
'99....	—	4,114,936		998,334	15	9
1800....	—	4,352,888	4s. 10½⅛d. 5s. 4½$\frac{8}{10}$d.	1,015,700	12	8
1801....	9,060,993	2,555,920	5s. 4½$\frac{8}{10}$d.	621,648	8	4
'02....	—	3,981,072		1,063,872	5	5

BRITISH SPIRITS (England), I—*Contd.*

Shewing the Gallons of British Spirits Charged Duty in England—Contd.

Year.	Population.	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Amount of Duty. £	*s.*	*d.*
1803....	—	5,370,377	5*s.* 4¼$\frac{6}{10}$*d.* 8*s.* –½$\frac{1}{10}$*d.*	1,466,577	7	1
1804....	—	3,690,745	8*s.* –½$\frac{1}{10}$*d.*	1,499,327	18	–
'05....	—	4,932,645		2,042,701	3	9
'06....	—	4,094,985		1,689,849	5	6
'07....	—	4,747,365		1,938,356	18	3
'08....	—	5,390,884		2,213,847	17	6
'09....	—	4,035,825		1,390,889	10	11
'10....	—	4,787,555		1,585,741	13	–
1811...	10,322,592	4,776,330	8*s.* –½$\frac{1}{10}$*d.* 10*s.* 2¾$\frac{7}{10}$*d.*	1,592,700	14	5
1812 ..	—	5,242,470	10*s.* 2¾$\frac{7}{10}$*d.*	2,587,505	4	2
'13	—	4,292,477		1,906,865	6	11
'14...	—	4,956,965		2,484,635	11	10
'15 ..	—	5,468,987		2,840,591	16	–
'16....	—	4,745,484		2,447,136	19	11
'17...	—	4,133,063		2,132,820	16	9
'18....	—	5,259,662		2,681,131	3	5
1819 ..	—	4,146,505	10*s.* 2¾$\frac{7}{10}$*d.* 11*s.* 8¼$\frac{8}{10}$*d.*	2,218,007	7	9
1820 ..	—	4,284,798	11*s.* 8¼*d.*	2,510,822	6	6
'21 ..	12,105,614	4,125,616		2,419,280	18	6
'22...	—	4,694,055		2,749,372	5	3
'23....	—	3,803,312		2,222,273	8	5
'24....	—	4,392,611		2,567,378	3	6
'25....	—	3,684,049		2,355,027	4	5
1826....	—	7,407,204	7*s.*	2,592,521	13	1
'27....	—	6,671,562		2,335,046	15	9
'28 ..	—	7,759,687		2,715,890	9	–
'29....	—	7,700,766		2,695,268	2	–
1830....	—	7,732,101	7*s.*—7*s.* 6*d.*	2,857,147	19	–
1831....	13,994,460	7,434,047	7*s.* 6*d.*	2,787,767	12	6
'32....	—	7,281,900		2,730,712	10	–
'33....	—	7,717,303		2,893,988	12	6

BRITISH SPIRITS (ENGLAND), I—*Contd.*

Showing the Gallons of British Spirits Charged Duty in England—Contd.

Year.	Population.	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Amount of Duty.		
				£	s.	d.
1834....	—	7,644,301	7s. 6d.	2,866,612	17	6
'35....	—	7,315,053		2,743,144	17	6
'36....	—	7,875,702		2,953,388	5	-
'37....	—	7,133,869		2,675,200	17	6
'38....	—	7,930,490		2,973,933	15	-
'39....	—	8,186,552		3,069,957	-	-
1840....	—	8,278,148	7s. 6d.—7s. 10d.	3,183,865	1	-
1841....	15,929,492	8,166,985	7s. 10d.	3,198,735	15	10
'42....	—	7,956,054		3,116,121	3	-
'43 ...	—	7,724,051		3,025,253	6	2
'44....	—	8,234,440		3,225,155	13	4
'45....	—	9,076,381		3,554,915	17	10
'46 ...	—	9,179,530		3,595,315	18	4
'47....	—	8,409,165		3,293,589	12	6
'48....	—	8,581,327		3,361,019	14	10
'49....	—	9,053,676		3,546,023	2	-
'50....	—	9,331,512		3,654,842	4	-
'51....	17,982,849	9,595,368		3,758,185	16	-
'52....	—	9,820,608		3,846,404	16	-
'53....	—	10,350,307		4,053,870	4	10
Year ended 31 Mar. 1855....	—	10,851,670		4,248,925	5	-
1856....	—	10,123,461	7s. 10d.—8s.	4,006,587	7	8
1857....	—	11,386,279	8s.	4,554,511	12	-
'58....	—	11,634,198		4,653,679	4	-
'59....	—	11,860,196		4,744,078	8	-
1860....	—	12,904,029	8s.—8s. 1d.	5,166,270	7	11
'61....	—	11,198,113	8s. 1d.—10s.	5,276,876	9	10
1862....	20,119,314	10,728,412	10s.	5,364,206	-	-
'63....	—	10,481,577		5,240,788	10	-
'64....	—	10,720,768		5,360,384	-	-
'65....	—	11,196,524		5,598,262	-	-
'66....	—	11,257,505		5,628,752	10	-
'67....	—	11,591,365		5,795,682	10	-
'68....	—	11,561,576		5,780,788	-	-
'69....	—	11,239,316		5,619,658	-	-

BRITISH SPIRITS (ENGLAND), II.

The foregoing statistics are taken from the "Report of the Commissioners of Inland Revenue, 1870," vol. ii. For the sake of continuity, the returns for the Solar Years from 1854 to 1873 inclusive, are appended from other official documents.

Year.	Population (Middle of Year).	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Number of Gallons of British Spirits Estimated to have been Consumed, 1854-58 inclusive.
1854	—	10,889,611	7*s.* 10*d.*	10,889,611
'55	—	10,884,100	7*s.* 10*d.* and 8*s.*	10,529,306
'56	—	9,343,549	8*s.*	11,080,279
'57	—	10,199,565	"	11,564,198
'58*	—	10,028,591*	"	12,149,088
1859	—	12,576,318	"	—
'60	—	11,894,385	8*s.*, 8*s.* 1*d.*, 10*s.*	—
'61	20,119,314	10,816,605	10*s.*	—
'62	—	10,458,892	"	—
'63	—	10,561,205	"	—
1864	—	11,098,252	"	—
'65	—	11,238,105	"	—
'66	—	11,717,111	"	—
'67	—	11,323,718	"	—
'68	—	11,327,223	"	—
1869	—	11,401,901	"	—
'70	—	11,940,803	"	—
'71	22,760,359	12,874,732	"	—
'72	—	14,468,803	"	—
'73	—	15,851,906	"	—

* From 1800 to 1858 the Returns given represent the quantity charged with duty for consumption, less the quantity exported on drawbacks. From 1859, inclusive, this return represents the quantity retained for home consumption in England, after deducting the quantity exported on drawback and removed, duty paid, from one part of the kingdom to the other. It is, therefore, supplemented by another column, giving the consumption for 1854-58, calculated as is done in the returns for the years 1859-73.

BRITISH SPIRITS (SCOTLAND), III.

Showing the Gallons of British Spirits Charged Duty in Scotland, and Spirits Consumed in Scotland, with Rates of Duty from 1853 *to* 1873, *inclusive.*

Year.	Population (Middle of Year).	Number of Gallons of British Spirits Charged with Duty for Consumption.	Rate of Duty per Gallon.	Number of Gallons, of British Spirits Estimated to have been Consumed, 1853-58, inclusive.
1853	—	6,534,648	3*s*. 8*d*. and 4*s*. 8*d*.	6,534,648
'54	—	6,553,239	4*s*. 8*d*., 5*s*. 8*d*., 6*s*.	6,553,239
'55	—	5,344,319	6*s*., 7*s*. 10*d*., 8*s*.	5,178,270
'56	—	7,175,939	8*s*.	5,368,052
'57	—	7,030,822	,,	5,575,171
1858*....	—	6,781,879*	,,	5,301,056
'59	—	5,404,174	,,	—
'60	—	4,729,705	8*s*., 8*s*. 1*d*., 10*s*.	—
'61	3,066,633	4,410,998	10*s*.	—
'62	—	4,400,271	,,	—
1863	—	4,693,950	,,	—
'64	—	5,014,121	,,	—
'65	—	5,198,607	,,	—
'66	—	5,462,465	,,	—
'67	—	4,983,009	,,	—
1868	—	4,907,701	—	—
'69	—	5,285,329	—	—
'70	—	5,501,987	—	—
'71	3,366,375	5,671,477	—	—
'72	—	6,452,831	—	—
1873	—	6,832,487	—	—

* See note attached to the Return for England.

BRITISH SPIRITS (Ireland), IV.

Showing the Gallons of Spirits Charged Duty in Ireland from 1853 *to* 1873 *inclusive, with Rates of Duty, and Consumption of such Spirit in Ireland, from* 1859.

Year.	Population (Middle of Year.)	Number of Gallons of British Spirits charged with Duty for Consumption.	Rate of Duty per Gallon.
1853	—	8,136,862	2s. 8d. and 3s. 4d.
'54	—	8,440,734	3s. 4d. and 4s.
'55	—	6,228,656	4s. 6s. and 6s. 2d.
'56	—	6,781,068	6s. 2d.
'57	—	6,920,046	"
'58*	—	6,402,142*	6s. 2d. and 8s.
'59	—	5,748,554	8s.
'60	—	4,714,558	8s., 8s. 1d., and 10s.
'61	5,788,315	4,286,598	10s.
'62	—	3,977,024	"
'63	—	3,862,937	"
'64	—	4,090,119	"
'65	—	4,374,443	"
'66	—	5,036,814	"
'67	—	4,892,654	"
'68	—	4,773,710	—
'69	—	4,934,360	—
'70	—	5,170,700	—
'71	5,386,708	5,617,435	—
'72	—	5,950,549	—
'73	—	6,224,108	—

* See note appended to the Return for England for this year.

COLONIAL SPIRITS. (United Kingdom.)

Year	Population (Middle of Year.)	Number of Gallons of Spirits charged with Duty for Consumption in the United Kingdom.	Rate of Duty per Gallon.
1853	—	—	—
'54	—	—	—
'55	—	—	—
'56	—	—	—
'57	—	—	—
'58	—	3,427,039	8s. 2d.
'59	—	3,575,139	"
'60	—	3,728,801	8s. 3d. and 10s. 2d.
'61	28,974,362	3,454,884	10s. 2d.
'62	—	3,319,754	—
'63	—	3,419,044	—
'64	—	3,729,845	—
'65	—	3,693 338	—
'66	—	4,127,120	—
'67	—	4,314,778	—
'68	—	3,950,084	—
'69	—	3,768,829	—
'70	—	3,851,149	—
'71	31,513,442	4,168,243	—
'72	—	4,404,667	—
'73	—	5,027,821	—

FOREIGN SPIRITS (UNITED KINGDOM).

Year.	Population (Middle of Year).	Number of Gallons of Foreign Spirits Charged with Duty for Consumption in the United Kingdom.	Rate of Duty per Gallon.
1858	—	1,155,274	15*s.*
'59	—	1,357,509	15*s.*
'60	—	1,793,122	8*s.* 6*d.* and 10*s.* 5*d.*
'61	28,974,362	1,741,887	10*s.* 5*d.*
'62	—	1,873,887	10*s.* 5*d.*
1863	—	2,155,218	—
'64	—	2,568,426	—
'65	—	3,034,368	—
'66	—	3,670,350	—
'67	—	4,024,377	—
1868	—	4,448,733	—
'69	—	4,403,986	—
'70	—	4,588,237	—
'71	31,513,442	4,758,490	—
'72	—	4,663,662	—
'73	—	5,232,477	—

COLONIAL AND FOREIGN SPIRITS.

Return of the Quantities of Colonial and Foreign Spirits Charged with Duty, for Consumption in England, Scotland, and Ireland respectively, and the United Kingdom, in each Year from 1869 *to* 1873 *inclusive.*

Years.	Number of Imperial Gallons of Colonial and Foreign Spirits Charged with Duty for Consumption.			
	England.	Scotland.	Ireland.	United Kingdom.
	Gallons.	Gallons.	Gallons.	Gallons.
1869	7,081,033	690,360	401,422	8,172,815
'70	7,377,250	617,446	444,689	8,439,385
'71	7,770,181	668,287	488,151	8,926,619
'72	7,878,612	660,938	528,533	9,068,083
'73	8,692,901	978,769	587,758	10,259,428

FOREIGN WINES (UNITED KINGDOM), I.

Year.	Population (Middle of Year).	Number of Gallons of Foreign Wines Charged with Duty for Consumption.	Rate of Duty per Gallon.
1859	—	6,775,992	From British possessions, 2*s.* 10$\frac{13}{20}$*d.*; Foreign, 5*s.* 9*d.* and 3*d.*
1860	—	6,718,585	From British possessions, 2*s.* 10$\frac{13}{20}$*d.*; Foreign, 3*s.*
1861	28,974,362	10,693,071	Containing less P.S. than 18 per cent., 1*s.*; 18 per cent. and less than 26 per cent., 1*s.* 9*d.*; less than 40 per cent., 2*s.* 5*d.*; less than 45 per cent., 2*s.* 11*d.* In bottles, less than 40 per cent., 2*s.* 5*d.*
1862	—	9,764,155	From 4th April, 1862, under 26 per cent. of P.S., 1*s.*; above 26 per cent. and under 42 per cent., 2*s.* 6*d.* For every additional degree above 41 per cent., 3*d.* In bottles, under 42 per cent., 2*s.* 6*d.*
1863	—	10,420,761	—
'64	—	11,397,764	—
'65	—	11,993,760	—
'66	—	13,244,864	—
'67	—	13,673,793	—
'68	—	15,064,575	—
'69	—	14,731,173	—
'70	—	15,079,854	—
'71	31,513,442	16,144,838	—
'72	—	16,765,444	—
'73	—	17,905,129	—

FOREIGN WINES, II.

Return of the Quantities of Foreign Wines Charged with Duty, for Consumption in England, Scotland, and Ireland respectively, and the United Kingdom, in each Year from 1869 *to* 1873 *inclusive.*

Years.	Number of Imperial Gallons of Foreign Wines Charged with Duty for Consumption.			
	England.	Scotland.	Ireland.	United Kingdom.
	Gallons.	Gallons.	Gallons.	Gallons.
1869	12,402,360	907,502	1,416,765	14,726,627*
'70	12,564,894	965,675	1,544,024	15,074,598
'71	13,488,885	1,030,749	1,621,049	16,140,683
'72	14,058,605	1,080,167	1,622,359	16,761,131
'73	14,916,341	1,252,587	1,731,904	17,900,832

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* The differences in the totals of this Return and the preceding, appear in the official documents without explanation; but they are too inconsiderable to require more than a passing notice.

DISCUSSION *on the* REV. DAWSON BURNS'S PAPER.

MR. DUDLEY BAXTER thought that the reader of the paper had concluded in rather eloquent but vague terms. He gathered from the paper that the author upheld the system of large duties, because it diminished the amount of consumption. He should like to know what other measures would be recommended by Mr. Burns and those who act with him, in order to carry out the ideas hinted at in the paper. He thought that in estimating the effect of the imposition of duty in reducing the consumption of beer, and particularly spirits, from the end of last century up to the present day, the introduction of non-intoxicating liquors, such as tea and coffee, should have been mentioned and taken into account. He could not agree with the author when he said that Mr. Gladstone's measures, by which alcoholic drinks of lower strength had been introduced, had not effected so much good as had been expected of them. As far as his own experience went, the effect of Mr. Gladstone's legislation had been to reduce very much the quantity of port and sherry, and to increase very considerably the quantity of claret consumed in this country. He remembered that in 1856 claret was 10*s.* per bottle at the inns and hotels, whereas now-a-days claret far better than was drank as *ordinaire* in the inns on the continent could be obtained for 1*s.* 6*d.* per quart bottle. Therefore, he maintained, that, as regarded the upper and middle classes, Mr. Gladstone's legislation had been of most decided advantage to the cause of temperance. That, together with the spread and cheapening, by his measures, of tea and coffee, had been one of the most effectual measures that had been adopted in this country for many years for the furtherance of the object Mr. Burns had so much at heart.

Mr. STEPHEN BOURNE said he entirely sympathised with the objects the author had in view in desiring by any means, or every means, to reduce the consumption of that which was a great national evil, yet he was sorry he could not read the figures contained in the paper as pointing conclusively to the results at which the author had arrived. Speaking of later days, he (Mr. Bourne) maintained that so far from the consumption of wines or spirits having diminished, it had gone on progressively increasing, not only in the total amount, but also in the proportion per head. The quantity of gallons upon which duty is charged was not a real test, but the proportion per head showed the love or hatred of the people generally towards intoxicating drinks. From some statistics which he had in his possession, he found that as far back as 1854 the amount per head of British spirits consumed was 0·94 gallon, with a duty of 7*s.* 10*d.* In 1855, the duty was raised to 8*s.*, and it might not be thought that the increase of 2*d.* would have much effect on the consumption, but singularly enough it fell to 0·79. So large a falling off could not, he thought, be attributed to the trifling addition of 2*d*. Between the two years, when the 2*d*. was only in partial operation, the quantity per head was from 0·74 to 0·79, and when it came into full operation in 1856, the amount rose to 0·83 per head. In the following year it was 0·86; in 1858 it fell to 0·82; in 1859 it was 0·84; and in 1860 it was 0·74. Then came an alteration in the duty from 8*s*. to 10*s*., and a decided fall in quantity from 0·74 to 0·68 and 0·65. Next year it rose to 0·66, and in the following year to 0·69; and it had gone on with various alterations up to the present time until it had risen to 0·91 per head of the population. There had been greater fluctuations at various periods other than those he had spoken of as being concurrent with the alteration of the duty, thereby showing that the difference in the quantity of drinks consumed must be attributed to other causes than the alteration of the duty. In 1866 it was 0·75, and 1868 it went down to 0·70; but the most remarkable increase that had taken place was in the years 1872 and 1873, which seemed to indicate the setting in of a mania in the country for the consumption of spirits within those two years. This increase had not been accompanied by any diminution of duty, and might, to a certain extent, be due to the prosperity of the population. From this he reasoned that these fluctuations were not confined to the periods when the alteration of duty took place, and that therefore some other influence must be at work. Concurrently with the increase of the duty on British spirits, there had been a marked fall in the duty on foreign spirits. In 1856 the duty on British-made spirits was 8*s*. per gallon, and on foreign spirits, such as brandy, gin, and rum, 15*s*.; but the policy then adopted was that of equalising the duty, not only between British-made and foreign spirits, but also between the duties of spirits consumed in various parts of the kingdom. Previous to that Ireland and Scotland had been always allowed to consume their spirits at half the duty imposed upon England. Now, there was no difference on the duty of British and spirits imported from the colonies, excepting some kinds of perfumed spirits. Adding all the figures together, it would be found that in 1854 the consumption per head of population was 1·3; in 1855 it fell to 0·96; next year it rose suddenly to 1·1, although the extra 2*d*. duty was in full force, and it had gone on fluctuating. It had been down as low as 0·83, which followed on the increase of duty on British spirits concurrently with the decrease of duty on foreign spirits. The consumption per head for 1873 as high as 1·22 gallon, the largest amount ever attained. There was, however, a slight indication this year of a falling off. In 1858, when the duty on foreign spirits was 15*s*. per gallon, the consumption per head was 0·16; when it was reduced to 8*s*. 6*d*. and 10*s*. 5*d*. it rose to 0·19; the following year with a duty of 10*s*. 5*d*. it was 0·18: therefore there had been a change in the quantity consumed adverse to the theory of the alteration of duty which the author had deemed to be the cause of it. In regard to wines, he computed from the table that in 1859 the consumption was 0·24 per head of the population. It had varied, during some years, being 0·37, 0·33, 0·35, 0·39, &c., until in 1873 it reached 0·56. Last year the consumption had begun to fall off. What to attribute that decrease to it would be hard to say, as there had been no increase in the duty to cause it It might be that the vintages had been unfavourable in France. He thought he was right in saying that the quantity of wine imported from France had fallen considerably. He found, from some figures in his possession, that the red wine imported from France in 1872 was 3,500,000 gallons; in 1873 there were 4,500,000 gallons, and this year the quantity had fallen to 3,500,000. Concurrently with that it would be found that from Portugal in 1872 there were imported 4,000,000 gallons; in 1873, 4,097,000; and this year 3,742,000. From Spain there were imported, in 1872, 8,400,000 gallons; in 1873, 9,500,000 gallons; last year, only 7,500,000. He held that these remarkable fluctuations were utterly irrespective of the alteration in the rate of duty. Whilst thus disputing the conclusions at which the author of the paper had arrived, he agreed with him entirely in the measures he proposed to adopt. He held that those who were determined to have spirits should be made to pay for the luxury. Thus those whose consumption was moderate would not be immoderately contributing to the national resources, and those who by immoderate use were the means of filling our gaols and workhouses, might not unfairly be made to provide for the expenses their vices occasioned. It was a fact worthy of notice, that the consumption of intoxicating liquors had so increased in this country that in the interval that elapsed between the negotiations of the Alabama claims and their final settlement, the whole of the money was raised by the growth of the duty upon spirits and intoxicating liquors. His advice to the Chancellor of the Exchequer would be to gradually and steadily raise the duty upon spirits, so that those who must have the deleterious compound would be made to pay the penalty, and by so doing would be contributing in larger measure to the resources of the country. If, on the contrary, by raising the duties there should be, as Mr. Burns thought, a diminution of consumption, then everybody should be ready to endorse the opinion of the Chancellor of the Exchequer, that the advance in wealth would far exceed in value any advance in revenue. Therefore there could not be a safer thing than to increase the duty on spirits, either to effect an increase in revenue or a diminution of that which was a national curse. The proper policy would be to attempt to create a surplus, not to provide for the national wants, but to reduce the national debt.

Mr. R. B. MARTIN said it would be interesting to know the difference which has been made in the retail price of intoxicating liquors, by the duty which has been imposed upon them at different times. It seemed to him that the consumption of intoxicating liquors was affected more by the prosperity of the country and the rate of wages, than by the amount of duty put upon them. He thought that until the population was far better fed than they were now, it was idle to suppose that their drinking propensities could be very much lessened. Years ago drinking among the upper classes was far more fashionable than it was now; and it was not until eating became more of a science that drinking habits were diminished. He felt sure that the craving for drink was, to an empty stomach, to a certain degree a natural one.

Mr. JEULA, in referring to the remarks of the author on illicit distillation, said it appeared to him that the deductions on this head were not complete without some notice or estimate of what would have been the result of an increased ratio of duty, which would render illicit distillation more profitable, and of a reduction of duty which would render it unprofitable.

Mr. WILLIAM GILBERT endorsed the opinion expressed by Mr. Martin as to the drinking habits of the last generation. Nothing was more common then than for a gentleman to have one or two bottles of wine at his dinner. This had completely died out, and improvement he thought was due in a great measure to the establishment of general institutions and clubs. If similar consideration were shown to the working man, it would have a great tendency to diminish his drinking habits. He had gone somewhat deeply into the subject, and he found, from the returns of the Reform, the Athenæum, and the Carlton Clubs, that the average expenditure for wine, beer, and spirits would be about 1*s.* 6*d.* per head. It might be said that the members of these clubs had an opportunity of drinking at home. That was true; still, he maintained that the English gentleman of the present day was perhaps the most sober man in Europe. Last spring when in Paris, where he joined the French Temperance Association, he obtained the returns of the five principal clubs in Paris; and he found that the expenditure per head at dinner was from 10*s.* to 15*s.* per head for wine. When a man went into a club he was not obliged to have any drink, unless he liked it, whereas if he went into a public-house he must. He thought that one of the greatest facilities that could have been given for drinking habits amongst ladies, was the selling of wine in grocers' shops. It was a positive fact that, at the present time, the drinking habits not only among women of the working classes, but also of the higher classes, was lamentably on the increase. Another result of the habit of drinking was increasing lunacy. The inspector-general of lunatics in France had discovered that in that country the consumption of alcohol had doubled in twenty years, and that lunacy, homicide, and suicide had increased in the same proportion; and he had no doubt the same rule would apply to England. He instanced several lunatic asylums that had recently been built, and had to be enlarged in order to provide accommodation for the increasing number of lunatics. From a conversation he had with a member of the Asylums' Board, he gathered that lunacy was on the increase, and that 54 per cent. of the lunacy in this country was to be attributed to intoxication. He believed that if the question of intemperance was taken up in regard to the effect it had on the moral condition of the people, great benefit would result.

Mr. WILLIAM SAUNDERS said there was one phase of the question that struck him, namely, the effect of the consumption of alcoholic liquors upon other trades in the locality. He should have been glad if the lecturer had given any information on that point, although no doubt it would be difficult to obtain. During the visit of Father Mathew to Ireland, in certain districts nearly all the working people took the pledge, and in one particular district it was found that while the consumption of alcoholic liquors diminished to the extent of 400*l.* per month, the consumption of other articles in the shops increased to double that amount. A similar instance occurred at Knottingley, when a few years since efforts were made to put a stop to drunkenness in that neighbourhood. He could not quite agree with a remark made by a previous speaker that drunkenness among the upper classes had decreased. He had occasion sometimes to visit the clubs, and he thought that 1*s.* 6*d.* represented a very small portion of the alcoholic liquors consumed by gentlemen frequenting them. He could not help seeing on some occasions that the effects of alcoholic liquors were much more manifest on the gentlemen who entered at 10 or 11 o'clock at night after "dining out;" with which of course the 1*s.* 6*d.* had nothing to do. During the last debate in the House of Commons on the subject of the new licensing bill, he was told by one of the officers of the House that in any of the ordinary thoroughfares in London there would not be found so large a proportion of people the worse for liquor at 11 o'clock at night as would be found in the lobbies and anterooms of the House of Commons. He confessed that from this and other facts which came under his observation, he could not take the same view as the gentleman who said that the amount of drinking among the working classes had very materially decreased.

Mr. J. T. **Hammick** said he should like to offer one word to soothe the apprehensions of those present who had heard so dismal an account of the spread of idiotcy and insanity in this country, following on the consumption of intoxicating liquors. At the census there was a special inquiry into the number of idiots and imbeciles, and the result was that their numbers were not proved to have been increasing in proportion to population. The simple conclusion arrived at was that a much larger number had come under the care of the State in well ordered and appropriate institutions.

Mr. **Gurner** said he could not help thinking that a large or even a small increase in the duties would lead to a revival of the worst cases of smuggling. If he was not mistaken, this point had been lost sight of by previous speakers.

Mr. D. J. **Kennelly**, referring to the remarks of previous speakers, said that as lunacy had become very much a legal question of late years, he believed that the apparent increase in the number of lunatics referred to, had been the result of judgments given in some of the courts. He should like to know the real object of the paper that had been read. He thought, however, that if the facts stated by the lecturer were true and were really borne out by statistics, his argument as to the consumption of spirits being affected by the rates was a sound one. The question was, what was to be done? He had given the subject a little attention, and had marked in his boyhood the moral change effected in Ireland by the instrumentality of Father Mathew. It was acknowledged in all civilised parts of the world that where temperance had been introduced it had effected good, although it should be remembered that every nation of the world, civilised or uncivilised, indulged in some sort of intoxicating liquor. The question to be considered in this country was, to what extent every man should be indulged so as to hit the happy medium.

Mr. LUMLEY, Q.C., thought it would be well if the Rev. Dawson Burns would turn his attention to the "Judicial Statistics," and give an abstract of the convictions there recorded for smuggling and breaches of the excise laws, and showing also what effect the duties had upon those offences; and what, relatively, the effect those offences had upon the consumption and the returns. Such an abstract would, in his opinion, form a good accompaniment to the paper.

Captain CRAIGIE said there were degrees of intoxicating spirit in several liquors that had not been referred to in the paper, and for one of those liquors—beer—he wished to enter a plea, as that beverage, he considered, was a food as well as a drink, and contained ingredients that were necessary to a large proportion of the population of this country. In drawing conclusions from the consumption of intoxicating liquors, it should be considered whether the increased consumption was of spirits or beer. If there was any alteration it should be one which would favour a drink which, when unadulterated, was so purely national, so little intoxicating, and so well adapted to a large proportion of the inhabitants of the country. With reference to the spread of idiotcy and lunacy, he thought it would be in the recollection of some present that some of the evidence given before the Committee of the House of Commons two years ago on "habitual drunkards," pointed very strongly to the consumption of gin as one particular source of idiotcy. There was a peculiar feature connected with gin, which in the case of other spirits did not hold good.

Dr. FARR said that as far as he could see, the thesis presented by the author, that high duties reduced the consumption of spirits, was not sustained. He found that the consumption of spirits in England in 1862, when the duty was 10*s*., was 10,400,000 gallons; and invariably down to 1873 the consumption had progressively increased, under the same duty, to 15,000,000 or 16,000,000 gallons in England. In Scotland it had increased from 4,400,000 to 6,800,000 gallons; and in Ireland from 4,000,000 to 6,000,000: and the importation of foreign spirits had increased in the ratio of 3 to 5, or rather more. He agreed with Captain Craigie as to the wholesomeness of beer as a beverage, and its suitableness for men engaged in out-door labour. He should be glad if all spirits, wine, and beer could be reduced into one form, so that the exact quantity of alcohol consumed could be ascertained. The increase in the consumption might be attributed to the higher wages now received by the working classes. He held that there had been a diminution of drunkenness among the upper classes, and that the cases referred to by a previous speaker were exceptional ones. Anything to diminish drunkenness he would be glad to support. Spirit drinking was baneful in a high degree: and he thought the duty on spirits should be, as Mr. Bourne suggested, raised as high as it could be without encouraging smuggling or illicit distillation. With regard to the question which had been raised as to insanity and idiotcy, the census no doubt, as Mr. Hammick stated, showed an apparent increase, and he (Dr. Farr) had written a paper sometime since on the subject, showing that this increase resulted from lunatics being better taken care of than they were formerly, and placed in well-appointed asylums instead of the workhouses and other places where they were often treated with the greatest cruelty. In order to prove that there had been an increase in the number of lunatics, it should be shown that there had been an increase of the attacks of lunacy.

Sir **James Anderson** said that having been in the State of Maine, he had an opportunity of observing that the law of total prohibition had had the effect of changing it from one of the most drunken, to one of the most sober States in America. He observed, however, that persons of any position having money, could obtain drink in some secret way; and he, therefore, became averse to passing any law that would encourage secret drinking. He was rather in favour of the imposition of a high duty upon intoxicating liquors, as he thought the obtaining of drink ought to be made more difficult than otherwise; although he was totally opposed to prohibition. He thought it would be a very fair act of the State to prohibit liquor on board ships, as if such a course were adopted it would no doubt save many wrecks.

Dr. **Edmunds** thought with Dr. Farr that the percentage of alcohol in the various kinds of intoxicating liquors should be the basis of all the calculations which were required for revenue and other purposes. Sir James Anderson had stated that the prohibitory law had had the effect of converting one of the most drunken into one of the most temperate States, and yet he said he was opposed to prohibitory legislation. He (Dr. Edmunds) thought it would be difficult to reconcile these two statements. With regard to the question of the amount of nutriment in beer, he would call Captain Craigie's attention to the very small portion of nutriment there was in a gallon of that beverage, and also to the fact that the same amount of nutriment that was contained in a pint of beer, could be obtained from a teaspoonful of oatmeal. With all due deference to the remarks of Dr. Farr, he would state that he had known a good many working men—puddlers and others—who had worked upon oatmeal water, which had the advantage of supplying all the fluid which was exhaled, of not damaging the tissues, and of really providing, at an infinitesimal expenditure, more wholesome nutriment than could be obtained from beer. He thought that the outcry as to the enormous increase of lunacy was a mere "bogle." He agreed with Dr. Farr that a great many asylums had been erected to meet a new organisation on the part of the State, and to make proper provision for lunatics who had formerly been crowded together in workhouse wards. With regard to drinking among the upper classes, he did not believe that education had very much to do with the amount of drunkenness in this country. From his own personal experience, and from conversations he had had with other physicians, he was sorry to find that there was now an amount of drinking on the part of middle-aged ladies that was really alarming. The question of drunkenness, he thought, would come out as a defined mathematical law. Given, a man, and given occasions in which he is mixed up with drinking usages, and let him be placed in circumstances which prevent him from getting comfortable meals, and drunkenness would be the result, whether the man was educated or illiterate.

Dr. **Farr** said he quite confirmed what Dr. Edmunds had said as to the drinking of oatmeal water by the puddlers. He had himself seen instances, and found that the men were better sustained than by drinking beer.

Mr. **Bourne** said that with regard to the question of illicit distillation, he omitted to state that in Scotland and Ireland, where the duty on spirits had increased threefold within the last twenty years, it had not been found that there was a larger amount of illicit distillation than before, so that there was no reason to suppose that an addition of 50 per cent. to the duty on spirits would lead to an increase of smuggling. Extensive smuggling had of late years very much decreased, and what smuggling there was now, was of a very petty character.

The Rev. **Dawson Burns**, in reply to the several speakers, said, he had been asked what the drift of his paper really was. He thought he had answered that by proving, as he maintained he had done, that taxation had a most distinct and sensible effect upon the consumption of intoxicating liquors. He had purposely avoided making any proposals as how to diminish the evil of intemperance, keeping as nearly as he could to the title of the paper, which was thoroughly statistical. He believed, however, that some modified form of prohibition, having the thorough consent of those to whom it would be applied, would have a most beneficial effect, and would, no doubt, meet some of Sir James Anderson's views. He had no doubt that the introduction of tea and coffee had been one very powerful and direct means of retarding the increase of the consumption of intoxicating liquors; but that had not affected the argument in his paper. He had not endeavoured to say that no other cause had tended to lessen the consumption, but that there had been a decided effect produced by taxation. He had shown by statistics, that in spite of the increase of the consumption of tea and coffee, there had been a large increase in the consumption of strong drink whenever the taxation had been reduced. So far from Mr. Gladstone's legislation having had the effect of driving out the stronger drinks by the introduction of lighter wines, he would point out that from 1858 to 1860 the average annual consumption of all foreign wines, including the lighter, was nearly 6,500,000 gallons; whereas in 1873 the consumption of Spanish and Portuguese wines was 10,500,000 gallons; and whoever had read the evidence given before the committee on "habitual drunkards" a few years ago, would find that whatever might have been the extended use of clarets, certainly among the middle classes there had been a lamentable extension of the use of the more potent liquors. Mr. Bourne, although arriving at the same conclusions as himself, had questioned the validity of his reasoning: but going back fifteen years, previous to which there was no doubt great incertitude in the returns owing to illicit manufacture, no one could look at the figures he had given in his paper without seeing the effect taxation had had upon the consumption of liquor. In dealing with the question properly, it should be seen how far each individual kind of liquor was affected by taxation. In such a case as the one under consideration, it was unfair to club the whole together. With regard to the superiority of beer over spirits as a beverage, there was no doubt an important distinction in regard to the proportion of alcohol, but he would state that the hardest physical work in this and other countries, was that which was done without beer. Franklin had demonstrated many years ago that no man could get any nourishment out of beer. In regard to its moral effects, no statesman would dare to propose any measures by which the sale of beer and its consumption should be increased. The effort of 1830 to force an increase in the consumption of beer by driving out spirits, was a grand blunder, the result being that the whole nation was almost drowned in a fresh flood of intemperance. It was impossible to deal with every argument that had been advanced in detail, but he thought that by a careful perusal of the paper it would be seen, so far as he had endeavoured to sustain any thesis at all, that the facts corroborated the conclusions at which he had arrived.

On IMPROVED DWELLINGS *and their* BENEFICIAL EFFECT *on* HEALTH *and* MORALS, *with* SUGGESTIONS *for their* EXTENSION. *By* CHARLES GATLIFF, ESQ., F.S.S.

[Read before the Statistical Society, 16th February, 1875.]

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IT is not my intention to occupy the valuable time of this meeting in pointing out the necessity for improving the dwellings of the less fortunate classes—a subject in which His Royal Highness the late Prince Consort took the deepest interest. On the 4th day of July, 1848, His Royal Highness visited the first block of buildings erected by the association I have the pleasure of representing. My object in this paper is to state the results of experience gained in the course of the thirty-three years, during which time I have been much interested in the subject of improved dwellings, and the supervision of them, and their occupants.

In the year 1841 my attention was first turned to the subject, and on the 15th September in that year, the following resolutions were passed at a meeting at which the Rev. Henry Taylor, then rector of Spitalfields, took the chair:—

" That an association be formed for the purpose of providing " the labouring man with an increase of the comforts and con- " veniences of life, with full compensation to the capitalist.

" That the first object of the association be to erect, rent, or " purchase suitable buildings, to be let in compartments, at a mode- " rate weekly rent.

" That the second object of the association be to erect, rent, or " purchase dormitories for the reception of nightly lodgers.

" That the third object of the association be to erect, rent, or " purchase small tenements for families, to be let at a moderate " weekly rent."

As in the opinion of the promoters it was absolutely necessary that the association, to be permanent, should be on the self-supporting principle, much time was devoted during the following four years to advocating this principle, which resulted in shares to the extent of nearly 20,000*l*. being taken up during that period. A favourable public feeling having been thus created, the provisional committee felt it their duty to apply for a royal charter of incorporation (then the only means of limiting the liability of each shareholder to the amount of his shares), and this was granted, upon the advice of the late Sir Robert Peel, on the 16th of October, 1845; and as a feeling then existed that too large a profit should not be made out of the class of tenants intended to be benefited, the charter limited the rate of dividend to 5 per cent.; any surplus, after providing a guarantee fund not exceeding 15,000*l.*, to be applied in extension of the object.

In the years 1843-44, and subsequently, other societies turned their attention to the subject, and at the present time 6,838 improved dwellings, capable of containing a population of 32,435, have been erected at a cost of about 1,209,359*l.*, by the agencies mentioned in the following table, some of whom have still considerable funds in hand, and are extending their operations, and are prepared to do so still further, when they can obtain sites in suitable localities at a reasonable cost.

Accommodation in Improved Dwellings Provided by the Undermentioned Agencies.

	Families Accommodated.	Individuals Accommodated.	Amount of Capital Expended.
			£
1. Metropolitan Association for Improving Dwellings of Industrious Classes	1,060	5,206	189,028
2. Society for Improving Condition of Labouring Classes	341	1,657	36,407
3 St. George's, Hanover Square, Parochial Association for Improving Dwellings of Labouring Classes	67	240	6,000
4. Marylebone Association for Improving Dwellings of Industrious Classes	572	2,860	28,203
5. Strand Buildings Company	38	200	5,000
6. Central Dwellings Improvement Company	180	800	10,823
7. London Labourers' Dwellings Society	383	1,915	50,294
8. Trustees of Peabody's Gift to the London Poor	954*	3,815	380,284
9. Improved Industrial Dwellings Company	1,452†	7,260	274,773
10. The Baroness Burdett Coutts	189	694	24,000
11. C. J. Freake, Esq.	108	700	10,000
12. William Gibbs, Esq.	175	660	36,500
13. The Corporation of the City of London	180	849	54,000
14. Countess of Ducie, J. Ruskin, Esq., and others	312	1,560	17.467
15. Right Hon. Russell Gurney, M.P.	10	44	2,400
16. W. E. Hilliard, Esq.	108	540	‡
17. G. Newson, Esq.	93	465	‡
18. Mr. Matthew Allen	126	630	18,860
19. Sir Sydney Waterlow, Bart., M.P.	95	475	12,500

* Buildings in course of erection for 422 families. † Ibid., for 462 families.

‡ Information not received at time of printing.

Accommodation in Improved Dwellings—Contd.

	Families Accommodated.	Individuals Accommodated.	Amount of Capital Expended.
			£
20. W. H. Hall, Esq.	35	140	5,689
21. Mrs. Harrison	61	230	9,085
22. Miss J. Ogle	100	500	10,000
23. G. Cutt, Esq.	80	400	*
24. J. H. Bedford, Golden Lane, Old Street	*	*	*
25 Brewers' Company	24	120	6,495
26. Duchy of Cornwall	50	250	11,451
27. Jewish and East London Model Lodging House Association	29	145	7,800
28. C. Gatliff, Esq.	16	80	2,300
	6,838	32,435	1,209,359

* Information not received at time of printing.

Of these dwellings the Metropolitan Association, at an expense of 189,000*l.*, has erected 1,060, which provide accommodation for upwards of 5,300 persons; and it is on my knowledge of the construction of these dwellings, and supervision of the tenants occupying them, that I more particularly base the statements I am about to make. For convenience sake, I shall divide my paper into two parts, the first relating to Health, the second to Morals.

PART I.

I shall first direct attention to the *rate of mortality* in these improved dwellings belonging to the Metropolitan Association. During the last eight years it has not exceeded 14 per 1,000, whereas the rate of mortality in the metropolis generally has been upwards of 24 per 1,000.

In the following tables I have given the causes of death that have happened in the improved dwellings of the Metropolitan Association in the eight years ending March, 1874, classified under distinct heads.

In classifying the causes of death, and in compiling and elucidating the matter contained in these tables, I am indebted to Dr. Guy, the President of this Society, whose friendship I have enjoyed since my early efforts to establish this movement.

I may here observe that the causes of death are returned to me monthly by the superintendent of each lodging house; and that his information can be corroborated by the surgeon in attendance, or the district registrar, if necessary.

The first table shows the causes of the deaths that have happened within the walls of the model lodging houses of the Metropolitan Association in the eight years ending March, 1874, grouped in the order of the Registrar-General's reports.

TABLE I.—*Causes of Death during the Eight Years ending* 1874.

Disease.	Years ending March								Total.
	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	
Zymotic—									
Small pox	—	—	—	—	4	4	—	—	8
Measles	1	1	1	1	2	1	3	4	14
Scarlet fever	2	—	2	4	7	1	1	—	17
Diphtheria	—	1	1	—	—	—	—	—	2
Quinsey	—	—	—	1	—	—	—	—	1
Croup	1	1	—	2	1	—	1	—	6
Whooping cough	1	—	4	3	—	1	3	1	13
Continued fever	—	1	—	1	3	2	1	—	8
Diarrhœa	4	—	2	1	2	4	2	2	17
Cholera	2	1	—	—	—	—	—	—	3
Rheumatic gout	—	—	—	—	—	—	1	—	1
Thrush	1	—	—	—	—	—	—	—	1
Constitutional—									
Dropsy	3	2	3	1	2	2	2	3	18
Cancer	—	—	—	—	—	1	1	—	2
Scrofula	—	—	—	—	1	—	—	—	1
Tabes mesenterica	1	—	—	—	—	2	1	1	5
Phthisis	9	8	12	16	9	9	11	3	77
Hydrocephalus	1	—	2	—	—	—	—	—	3
Local—									
Cephalitis	1	1	1	—	2	1	1	2	9
Apoplexy	2	—	1	—	—	—	1	1	5
Paralysis	—	3	—	—	—	1	1	2	7
Convulsions	2	5	6	4	5	5	4	6	37
Brain disease, &c.	—	2	3	2	1	—	2	1	11
Heart "	1	2	4	2	1	1	2	1	14
Bronchitis	3	8	8	12	14	14	4	11	74
Pneumonia	3	3	2	4	3	1	3	3	22
Asthma	1	—	3	—	1	2	2	1	10
Lung disease, &c.	1	—	—	—	—	1	—	1	3
Peritonitis	—	—	—	—	—	—	1	—	1
Stricture of intestines, &c.	—	—	—	—	1	2	—	3	6
Fistula	—	1	—	—	—	—	—	—	1
Jaundice	—	—	—	—	1	1	—	—	2
Liver disease, &c.	—	1	—	—	—	—	1	—	2
Diabetes	—	—	—	—	—	1	—	—	1
Phlegmon	—	1	—	—	2	1	1	1	6
Abscess	—	—	—	—	1	—	1	—	2
Developmental—									
Premature birth	2	—	—	—	—	—	—	—	2
Teething	1	—	1	3	—	—	4	—	9
Childbirth	1	—	1	—	1	1	1	2	7
Atrophy and debility (old age)	3	2	5	3	1	2	4	3	23
Violence and Accident—									
Concussion of brain	—	1	1	—	—	—	1	—	3
Injury to spine	—	—	—	—	—	—	—	1	1
Suffocation	—	—	—	—	—	—	—	1	1
Suicide	—	—	—	—	—	1	—	—	1
	47	45	63	60	65	62	61	54	457
Cause not stated	—	2	—	—	1	—	1	1	5
Total	47	47	63	60	66	62	62	55	462

The second table presents a summary of these causes of death in the five leading classes adopted by the Registrar-General.

TABLE II.—*Classified List of Causes of Death.*

Classes of Disease.	Years ending March								Total.
	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	
1. Zymotic diseases	12	5	10	13	19	13	12	7	91
2. Constitutional	14	10	17	17	12	14	15	7	106
3. Local	14	27	28	24	32	31	24	33	213
4. Developmental	7	2	7	6	2	3	9	5	41
5. Violent and accidental	—	1	1	—	—	1	1	2	6
	47	45	63	60	65	62	621	54	457
Cause not stated	—	2	—	—	1	—	1	1	5
	47	47	63	60	66	62	62	55	462

The figures of this table show the fluctuations which present themselves in all similar returns, which fluctuations are set forth in the annexed summary of the highest and lowest figures in each group:—

	Lowest.	Highest.
Zymotic diseases	5	19
Constitutional	7	17
Local	14	33
Developmental	2	9
Violent and accidental	1	2

The next table in order (Table III) shows for the seven years, 1867-73, the proportion per 1,000 of the five leading classes of disease in the model lodging houses, compared with the mortality from the same causes in the metropolis.

TABLE III.

	Model Lodging Houses.			The Metropolis.		
	Maximum.	Minimum.	Mean.	Mean.	Maximum.	Minimum.
1. Zymotic	292	111	209	244	284	199
2. Constitutional................	283	222	248	191	202	177
3. Local	493	298	451	418	463	396
4. Developmental	145	81	90	113	126	106
5. Violent and accidental	—	—	2	34	37	31

In this table the less proportional number of deaths from zymotic and developmental diseases, and from violence, is observable.

The next table (Table IV) exhibits the *death-rate* per 1,000 in the model lodging houses, compared with that prevailing in England, chief English towns, London, and its five leading districts.

These figures show the death-rate—a sanitary test to which so much attention has lately been given—to be more favourable among the population of our model lodging houses, than in England, in London, or in any of our London districts, during the five years to which the comparison is necessarily limited. There is not one year in which the death-rate prevailing in the model lodging houses is not much lower than in England and in the country, city, and town districts with which it is brought into comparison. Take, for instance, the healthy year 1868, it shows a death-rate in the model lodging houses of 15 per 1,000, the most favourable figure for any mixed population of male and female being 22, a difference of 7 per 1,000 in favour of the model dwellings. Or take the less healthy years 1867 and 1869. The model lodging houses show a death-rate of 18 for both years, and the others a *minimum* of 22, a difference of 4 per 1,000. But if we substitute, in the case of the chief towns, of London, and of its districts, the most unfavourable for the most favourable death-rate, we have a difference in favour of the model dwellings of 26 — 15 = 11; 25 — 18 = 7; and 28 — 18 = 10.

TABLE IV.—*Deaths per* 1,000 *from all Causes in Model Lodging Houses, in England, and in London, during the Five Years ending* 1871.

	Years ending.				
	1867.	1868.	1869.	1870.	1871.
Model lodging houses	18	15	18	16	17
All England (males)	23	23	24	24	24
„ (females)	21	21	21	22	21
„ chief towns	24	24	25	25	25
„ London	23	24	25	24	25
„ west district	22	22	22	24	22
„ north	23	23	24	24	26
„ central	25	26	27	26	25
„ east	24	26	28	25	26
„ south	22	23	24	24	24

But as it may be objected that the death-rate would be no test of the sanitary state of our model lodging houses if, on inquiry, it should turn out that the ages of the inmates differ widely from those of the general population of London, I caused a Census of the population of our model lodging houses to be taken on the 21st day of last December, under the two heads of inmates under 10 years and above 10 years of age. Table V shows the result of this inquiry. In every 1,000 inmates, 330 were under 10, and 670 above; while in the population of London the ages were distributed as 237 per 1,000 under 10, and 763 above 10.

These figures differ from each other more widely than might have been expected. They show that, when compared with the rest of the inhabitants of London of all classes, the inmates of our model lodging houses constitute a young population.

But this census of the population of the lodging houses of the Metropolitan Association has enabled me to proceed a step further in the work of analysis. Having already ascertained the number of deaths for the year ending March, 1874, under the two categories of deaths under 10 and above 10, and having also a return of the average population of the year, I was able to make the calculation shown in Table VI to ascertain the death-rate under 10 years, and to compare it with that prevailing at the same period of life in the general population of the metropolis. It will be seen by this table that while the death-rate of children under 10 years of age in the lodging houses of the Metropolitan Association (based upon ascertained deaths and calculated average population) was 24 per 1,000, it was nearly 48 per 1,000 for the general population of London.

That this favourable death-rate under 10 years of age does not arise from a low birth-rate leading to a low ratio of infants and young children, is a just inference from the ascertained facts that the birth-rate in the lodging houses of the Metropolitan Association for the seven years ending 1874, was 36 per 1,000, or 1·5 per 1,000 in excess of the London birth-rate of 34·5 per 1,000.

If it should be objected that the comparisons now made between the model lodging houses and the general population of London are wanting in exactness, inasmuch as the year 1874 is compared with the year 1871, and the population of the model lodging houses as used in the calculation is an average of the year, it will suffice to state that in any case the figures for the model lodging houses and general London population are so wide apart as to justify the assertion that the population of the model lodging houses is much more healthy than that of the mixed population of London of all classes.

I may add, that in these favourable figures—24 per 1,000 for persons under 10 years of age, 8½ per 1,000 for persons above that age, and less than 14 per 1,000 for all ages—we have a high standard of healthiness with which to compare the death-rate of members of the working class generally; for the inmates of these model houses always undergo a twofold process of selection; that is to say, the inmates first select the model lodging houses as harmonising with their own decent tastes, and are then chosen from a larger list of applicants, according to the discretion of the managers of those institutions.

TABLE V.—*Population of Model Lodging Houses* (1874) *Under and Above* 10 *Years of Age, compared with that of the Metropolis at the same Ages,* 1871.

	Population.		Per 1,000.	
	Under 10.	Above 10.	Under 10.	Above 10.
Model lodging houses	1,290	2,619	330	670
Metropolis	772,315	2,481,945	237	763

TABLE VI.

Age.	Model Lodging Houses.			London.
	Average Population, Year ending March, 1874.	Deaths, Year ending March, 1874.	Death-rate per 1,000.	Death-rate per 1,000, 1871.
Under 10........	1,290 + 41* = 1,331	32	24·04	47·66
Above 10........	2,619 + 82* = 2,701	23	8·51	17·57
	3,909 + 123 = 4,032	55	13·64	24·60

* Proportionate addition required to raise the population at the date of the census (21st December, 1874) to the average population of the year ending March, 1874.

In the table which follows (Table VII), the ages of the inmates of our lodging houses, and the average size of the families accommodated, are contrasted with the inhabitants of England and Wales. It results from these comparisons:—

1. That the population is a young one.
2. That it is an increasing one.
3. That the small number above 60, among whom a high mortality would naturally prevail, must in some degree counterbalance the high number under 10, at which also a high death-rate prevails.
4. But that, considering the large excess of young children, the low death-rate is a strong indication of wholesomeness even when full weight is given to the comparatively small number of old men.

Table VII.—*Ages of the Inmates of the Lodging Houses of the Metropolitan Association, compared with those of the Population of the Metropolis; also the Number in Family with that of England and Wales.*

	Model Lodging Houses.	London.	Excess or Defect in Model Lodging Houses.
Under 10	330	287	+ 93
10 to 60	638	701	− 63
Above 60	32	62	− 30

Average to a family, model lodging house .... 4·91
„ England .... 4·41

The reduced rate of mortality shown in the preceding tables is but part of the advantage accruing to the tenants of our model dwellings. There must be a saving of disease as well as a decrease of deaths. If we assume that for each person dying there are only two persons afflicted with disease so severe as to prevent them from following their ordinary occupations, the advantage conferred upon them in the shape both of economy of time and economy of expense must be very considerable.

Another material fact has been elucidated in the erection of improved dwellings by the Metropolitan Association. I allude to the comparatively small space which they occupy, even if we include the large court-yards left for recreation and ventilation. When we consider the diminished rates of mortality and disease which accrue to the tenants in them, notwithstanding that the average population is at least four times more to the acre than in the most densely populated parts of the metropolis, we have an irresistible argument in favour of the increase and extension of this class ot buildings.

In Westminster, which is the most densely populated part of the metropolis, the population is only 235 persons to the acre; whereas in the dwellings provided by the Metropolitan Association, including in the areas the large court-yards and gardens attached, the average is 1,140 to the acre; and yet the rates of mortality and disease are at the low figures just stated.*

The total area of land occupied by the eight buildings in flats of the Metropolitan Association, accommodating 817 families in crowded parts of the metropolis, is 156,732 superficial feet, and of this 74,620 superficial feet only are covered by the improved

* In one instance (that of the Farringdon Road Buildings) the population is 1,625 to the acre.

dwellings, five, six, and seven storeys high, the remaining 82,112 feet being devoted to play-grounds for the children, and for improved ventilation. It is therefore obvious, that if the promoters of the various metropolitan improvements were compelled, under their respective Acts of Parliament, to reserve sites for improved dwellings in the immediate locality from which they displace so many of the labouring population, such improvements might be carried on, not only without injury, but with great benefit to the working classes.

PART II.

But this great decrease in the rate of mortality and disease, and less space occupied by the improved dwellings, are not the only benefits which have been developed by this movement; and this brings me to the second part of my paper. I allude to the check given to immorality and crime.

I do not here allude to any interference or intrusion upon the privacy of families, as such does not take place; but my experience and remarks are simply in support of the view, that if bad characters have not places where they can take shelter, conceal stolen goods, and carry on their malpractices, their evil doings will be seriously affected as regards themselves, and beneficially as regards the community at large. The improved dwellings of the Metropolitan Association have elucidated this point in the facilities they afford for the detection and suppression of crime.

The Metropolitan Association has twelve sets of dwellings in different parts of the metropolis, which have accommodation for a population of 5,300, or an average of near 420 persons at each establishment. At each of these establishments a superintendent resides to collect rents, supervise, and make himself generally useful; and there is a labourer to execute repairs, also residing on the premises. These men, in performing their duties, become acquainted with the tenants, their occupations, and pursuits, and soon detect any drunkards, brawlers, prostitutes, receivers of stolen goods, or other bad characters, who occasionally resort to improved dwellings to evade suspicion.

Many years ago several such characters were brought under my notice, and were detected and sent away.

About twenty years ago, in one of the dwellings of the Association in Spitalfields, fortunately fire-proof, a working distiller established himself, with his *illicit still*—the rent was regularly brought down to the collector to avoid his seeing inside the door of the tenant's rooms, and all went on most regularly until a shoemaker, an old excise pensioner, living in one of the basement dwellings, stated his suspicion to the collector that there was at times a strong smell of "*wash*" from the drains; this led to inquiry and inspection of the rooms, when the still was found. The flooring was deeply charred by the fire.

A case has recently come under my notice, of one of the tenants of the Association being found secreted, with another man, in the Workman's Club-house recently erected by the Duke of Westminster in the Belvedere Road, Pimlico, for the purpose of stealing some lead which was stored there. They were convicted and sentenced to a term of three months' imprisonment by the magistrate, and the fact becoming known among the tenants at the buildings, an outcry was soon raised by them in defence of their property in the wash-houses, &c., and the rest of the family were sent away. With this exception few cases of this kind have come under my notice for many years.

Having stated some of the benefits arising from the improved dwellings—

1. In the decrease in the rate of mortality and disease;

2. The less area occupied by them, and the greater number of persons provided for, notwithstanding the large spaces set apart for recreation and ventilation;

3. The facilities they afford for the detection and suppression of crime,—I venture now to offer some suggestions for their extension; and as I propose first to call attention to the necessity of providing sites in advisable situations and at a moderate cost, it is necessary that I should state the ground rents paid by the Metropolitan Association for the sites of their dwellings.

The ground rents, or *cost of land alone*, of the dwellings of the Metropolitan Association, vary from 1¼*d.* to 1*s.* 6*d.* per *family per week*, according to locality. In Spitalfields they are 2*d.* per family per week; near Golden Square, Regent Street, they are 1*s.* 6*d.* per family per week; but in the latter locality wages are higher, and the tenants living near their work are saved much time, fatigue, and expense in going to and from their work, and in being able to take their meals with their families instead of at the public house.

To facilitate the obtaining sites, the assistance of Parliament may be required to give compulsory powers to purchase and pull down many of the existing dens of disease and crime, and erect improved dwellings; and in support of the expediency of this assistance being granted, I avail myself of the information contained in a report presented to the Committee of the Charity Organisation Society, on November, 1873, by a special committee on metropolitan dwellings. In that report it is stated that: "In "the year 1866 the town council of Glasgow obtained an Act of

" Parliament, which was renewed in the year 1871 enabling the " lord provost, magistrates, and council of that city, to take lands " and houses compulsorily, to erect new buildings, and dispose of " the same; to erect and maintain houses specially adapted for " the working classes, to borrow for these purposes a maximum of " 1¼ million sterling; to charge interest for the sum borrowed on " the town rates, levying an annual rate for the purpose of the act " not exceeding 6*d.* in the pound.

"The report goes on to state that up to the month of " June, 1872, upwards of one million sterling had been expended " on properties, a portion of which had been *profitably resold*, while " the greater part was provisionally held and let, but in an " improved condition, and yielding 24,000*l.* per annum.

"In the course of these operations seats of contagious fever "had been extirpated, haunts of prostitutes, of crime, and of "intemperance had been broken up or restricted, and streets of " new houses and shops of various kinds had been erected, but " with due regard to the accommodation of the working classes.

" At the outset, the town council had contemplated a rate of " 6*d.* in the pound, and a loss on the whole transaction of 200,000*l.*, " but the 6*d.* rate was only requisite for a single year; it was kept " at 4*d.* for two years, and had since been reduced to 3*d.*, with the " prospect of soon being fixed at 2*d.*, while the capital loss was not " expected to exceed 50,000*l.* at most.

" The process of demolition was protected by a provision in the " act, which prohibited the ejectment of more than 500 of the " population at once, without a certificate from the sheriff that " accommodation for the number removed was obtainable in the " neighbourhood.

"Improvements in Edinburgh have been prosecuted under a " local act granted in 1867, based on the same principle as that of " Glasgow, and containing similar provisions. The results have " been equally satisfactory.

"In only one case has the town council exercised the power of " erecting buildings, commercial enterprise having at once under- " taken the requisite amount of work. In that instance a block of " model buildings for working men was erected which was eagerly " bought up by skilled mechanics, showing the high appreciation of " improved dwellings, and the benefits attached to the possession of " house property entertained by that class."

In the Liverpool Sanitary Amendment Act of 1864 the principle of compensation is admitted, and has greatly contributed to facilitate the work of closing and removing obnoxious structures, by which the sanitary condition of the town has been much improved.

Such being the beneficial result developed by the existing improved dwellings, and the working of the Acts already passed with the object of facilitating the destruction of fever dens, the haunts of thieves, and erecting improved dwellings, I would suggest that Parliament should confer similar benefits on this metropolis, vesting the necessary powers in the Metropolitan Board of Works and the Corporation of the City of London; and should an additional 1*d.* or 2*d.* in the pound for this purpose be included in the precepts from time to time issued by those bodies, such additional charge would soon be amply recouped by a reduction in the rates at present occasioned by disease and crime.

The present rateable value of property in the metropolis is nearly 21,000,000*l.*—a rate of 1*d.* in the pound would produce nearly 90,000*l.*, or sufficient to pay the interest on 2,000,000*l.*, and redeem the principal in forty years, if the money was raised at 3½ per cent.; 2,000,000*l.* would go a long way in paying simply the difference between the purchase money of the land and the sum received on resale, and 2,000,000*l.* applied in the mode suggested, would remove very many of the present dens of disease and crime.

The erection of improved dwellings might also be materially assisted by empowering the Public Works Loan Commissioners to make advances at a reduced rate, say 3½ per cent., or such rate as the Commissioners of the Treasury deem necessary in order to enable the loan to be made without loss to the Exchequer, as they are at present empowered to do under the Public Health Act for sanitary purposes.

Another mode in which the Government can materially assist this movement is by rendering it compulsory upon all the railway companies to carry working men at the rate of 1*d.* for at least 10 miles, as some are obliged to do at present; and it should be compulsory on existing railway companies to give such facilities on lines the construction of which was sanctioned without such clauses being inserted in their Acts.

Of the fact that bricklayers, carpenters, engineers, and others working at sixty-three different trades carried on in London, will avail themselves of the opportunity of living 7 or 8 miles out of town, the Metropolitan Association have had eight years experience in the 164 cottages they erected in the year 1866 in the parish of Beckenham, the tenants of which are paying 2*s.* a-week for railway fares, in consequence of clauses compelling the railway company to carry at workmen's fares not having been inserted in the Act empowering them to form that line.

In drawing attention to cottages in the country, I fully admit the great necessity for erecting improved dwellings in London; still if one *tithe*, or even one-twentieth, part of the working men will rise at 5 in the morning to return to wholesome recreation in their gardens in the evening, which eight years' experience of the Metropolitan Association proves that men following sixty-three different trades in London will do, to say nothing of the daily experience of the large number of working men who now use the railways, I think it very advisable that they should have the opportunity. This procedure would have the incidental advantage of reducing the overcrowding in London.

Another reason why facilities should be given to working men to reside in the country is, that the rents are considerably lower in consequence of cheaper ground rents or cost of land, and that a great saving can be effected in the construction of their houses.

The experience of the Metropolitan Association is, that the ground rents of cottages in the country are 3½*d.* per family per week, while those in London average 8*d.* per family per week; and also that cottages in the country can be constructed at 34*l.* per room, while the construction of dwellings in London costs on the average 46*l.* per room; this arises from the additional thickness of walls required in the metropolis, and bad foundations entailing deep excavations and much additional concrete and brickwork. In one of the buildings of the Metropolitan Association, the foundations had to be excavated to a depth of upwards of 22 feet, and in another a steam pump was kept at work upwards of two months in consequence of a shifting sand presenting itself, during which time additional concrete was put in and strong walls erected at great expense.

The Metropolitan Association let each of their semi-detached cottages and a piece of garden ground 20 feet by 80 feet deep, at 2*s.* and 3*s.* a-week less rent than they can obtain for their dwellings in London, and still obtain as good a return on the investment.

The Lord Provost of Glasgow stated before the Committee of the Charity Organisation Society, that some of the model lodging houses erected there had been profitably sold, referring at the same time to the dividends paid and profits made by several of the existing companies in London.

I feel that the erection of improved dwellings in the metropolis may be regarded as a safe investment, and in further support of this I refer to the audited accounts of the Metropolitan Association for the last year, which show a gross rent roll of 12,257*l.* 5*s.*, of which 12,101*l.* 1*s.* 3*d.* was actually received, leaving a deficiency of 156*l.* 3*s.* 9*d.* only of the gross income for unavoidable vacancies during changes among 796 weekly tenants, and during repairs of 3,032 rooms, and from all causes. The Metropolitan Association have for the last five years paid a dividend of 4½ per cent., which would, I feel assured, have been larger had they not, as pioneers in this great movement, had to encounter many difficulties by which their followers have profited. (See note at foot of Table B of Appendix.)

I have attached to this paper a map, on which I have marked the improved dwellings erected by the existing agencies in different parts of London. I trust that these dwellings may be regarded as a "leaven" introduced into this great metropolis,—and that, aided by competition and emulation, sanctioned and protected as it is by Her Most Gracious Majesty, in exercise of Her royal prerogative, may little by little extend its wholesome working to the whole.

I append to this paper a table showing the superficial area of land of each establishment, the area covered by dwellings, and the space left for ventilation and recreation, the number accommodated, cost and dimensions of rooms, and the rents of the different dwellings, which are collected weekly and payable in advance.* They vary from *2s.* *6d.* to *9s.* *6d.* per week. Those on the ground-floor let at *6d.* a week less than the first floor rooms, from being more noisy, the windows more liable to be broken, and being overlooked. The rooms from the second floor upwards in the lofty buildings, all let at the same rents, some tenants preferring the upper floors on account of better light and air, and being quieter. All the rooms are supplied with every convenience of water, dust shoots, &c.

I cannot close this paper without adverting to a *still less fortunate class* than those I have been referring to, namely, those who, from their very small and precarious earnings, cannot pay the rents entailed by the unavoidably expensive construction of dwellings in the metropolis.

That such expense is necessary may, I think, be taken as proved by the efforts made by some of the existing agencies to build in the most economical manner, consistent with safety; and I venture to say that the monies expended by some of those agencies have been well spent, and may be taken as a fair test of the cost of improved dwellings, and of the rents at which they can be let, so as to yield a fair return to the capitalist. I may here mention a circumstance corroborative of an opinion I have heard expressed, and in which I concur, that the least fortunate classes require more or less *educating* to appreciate these improved dwellings.

The late Sir Ralph Howard, Bart., Chairman of the Metropolitan Association for twenty-seven years, knowing that many families lived in one room, in the year 1871 built a house containing sixteen large single rooms, with washing tubs and coppers, and an ample water supply, &c., arranged on each floor. Each room was also supplied with two iron bedsteads and a curtain to divide them; and two berths for children were also arranged as on board ship, at the side of the fireplace.

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* I also append two Tables (A and C) showing the occupation of the tenants of our dwellings both in town and in the suburbs.

When the building was finished and applicants came to look at the single rooms, they were not satisfied: "Wanted two rooms," "Did not want the bedsteads and curtain," and so the rooms remained nearly empty for more than twelve months. Sir R. Howard, much disappointed, sold the house.

Fortunately there was an additional piece of land on one side of the house, and having become the purchaser, I erected eight additional rooms to be used as bedrooms, so that there are now eight sets of two rooms, and eight single rooms.

The curtains were taken down, and the bedsteads met with a hearty welcome in one of the London hospitals. These comforts being removed, eight families have been found willing to occupy the single rooms, and the whole house is now fully occupied.

To benefit the least fortunate class, I feel that the greatest facilities should be given to improve the condition of those immediately above them, by providing sites at fair rents, and pressing forward the erection of improved dwellings in the metropolis and in the suburbs. And (here I quote the substance of what I wrote in 1854) "although many may not be able to pay the rents "required to yield full compensation to the capitalist, still by "providing such improved dwellings, we help those who will help "themselves, check the downward current, and to some extent "relieve the less fortunate from their present overcrowded state. "A hearty co-operation in this great object, will secure the effect of "competition, so that ultimately *all classes* will be incalculably "benefited. But this much cannot be done unless the investment "yields a fair return. This course preserves the independence of "the tenants, while charity creates the distress it relieves, though "it cannot always relieve the distress it creates."

TABLE A.—*Occupation of Tenants Residing in Cottages of the Association at Beckenham.*

Account-book ruler	1
Bricklayers	2
Bookbinders	6
Bridle cutters	2
Book marbler	1
Bootmakers	2
Butcher	1
Broker's assistant	1
Blacklead maker	1
Brass founders	2
Cigar maker	1
Compositors	10
Carpenters	12
Cabinet makers	4
Curriers	2
Carpet planners	3
Collector	1
Customs officer	1
Clock maker	1
Coach trimmer	1
Decorators	3
Engineers	4
Engravers on wood	2
Gardeners	4
Gas meter makers	2
Gunsmiths	5
Gasfitter	1
Hatter	1
Lithographic printers	2
Messenger	1
Metal polisher	1
Military ornament maker	1
Porters	2
Paper stainers	2
Packer	1
Painter	1
Printers	5
Printers' roller makers	2
Packing case maker	1
Policemen	2
Pianoforte maker	1
Stained glass painter	1
Stationer's assistant	1
Straw-hat maker	1
Saddler	1
Sewing-machine makers	2
Silver-lace maker	1
Surgical instrument makers	2
Tinplate workers	4
Tailor	1
Tobacco cutter	1
Upholsterer	1
Watch engravers	2
Warehousemen	29
Wheelwright	1
Whitesmiths	3
Wire drawer	1
Waiters	2
Watch case makers	2
Watch jeweller	1

APPENDIX.

Table B.

Dwellings for Families on Flats.	Date when Built.	Superficial Area in Feet.			Population.		Rents.	
		Total Superficial Area of Land.	Super-ficial Area Covered.	Area for Recreation	Number of Families.	Average Total Population, 1 Year.	Rent of Four Rooms per Week.	Rent of Three Rooms per Week.
1. Albert Family Dwellings, Spitalfields (freehold)	1849	16,000	5,848	10,152	60	303	4/8 to 6/	4/ to 4/8
2. Albion Buildings, Bartholomew Close, Aldersgate Street (freehold)	Bought 1854	1,966	1,621	345	20	80	—	—
3. Farringdon Road Buildings, Farringdon Road (leasehold)	Built 1874	33,880	17,909	15,971	264	1,260	6/9 to 9/6	6/ to 7/3
4. Gatliff Buildings, Commercial Road, Pimlico (leasehold)	'68	30,016	11,004	19,012	149	610	—	5/6
5. Hamilton Square, Snow's Fields, Bermondsey (freehold)	'55	27,900	10,580	17,320	108	635	6/6 to 7/	5/ to 6/6
6. Howard Buildings, Albert Street, Spitalfields (freehold)*	'49	9,800	7,360	2,440	46	219	6/ to 7/6	5/ „ 6/
7. Ingestre Buildings, Golden Square (leasehold)	'54	11,250	8,446	2,804	60	380	6/6 „ 8/6	6/ „ 6/6
8. Pancras Square, Old St. Pancras Road (leasehold)	'46	25,920	11,852	14,068	110	648	6/ „ 7/9	4/3 „ 5/9
		156,732	74,620	82,112	817	4,135	—	—
Cottages.								
9. Albert Cottages, Albert Street, Spitalfields (freehold)	1858	17,550	7,437	10,113	33	130	—	5/ to 5/8
10. Alexandra Cottages, Beckenham, Kent, (freehold)	'66	337,590	71,658	265,932	164	876	†	†
11. Queen's Place Cottages, Dockhead (leasehold)	Bought 1854	2,277	2,117	160	10	54	4/6	—
12. Victoria Cottages, Albert Street, Spitalfields (freehold)	Built 1864	17,435	8,194	9,241	36	81	7/ to 7/6	5/ to 5/8
		374,852	89,406	285,446	243	1,141	—	—

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* This building was originally erected as a lodging house for 234 single men, at a cost of during a period of eighteen years, the directors felt it their duty to convert it into dwellings for faction of the building being fully occupied, and the percentage increased to near 2½ per cent. on

† These semi-detached cottages of five and six rooms each, with garden attached, 20 feet by

‡ This is a small property only, where a small difference in receipts or expenses will much

APPENDIX.

TABLE B.

Rent.	Cost of Land.			Cost of Building.				
Rent of Two Rooms per Week.	Cost of Land.	Ground Rent of Land.	Ground Rent per Family per Wk.	Cost per Room, exclusive of Land.	Gross Cost.	Gross Rents for Year 1873-74.	Expenses for Year 1873-74.	Percentage on Gross Cost.
	£ *s.* *d.*	£ *s.*	*s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	
—	650 - -	26 -	- 2	41 19 -	11,365 11 8	842 1 11	305 3 10	4¾
4/ to 5/	Bought, in	cludin	g land.	Bought ready built.	2,381 1 1	244 4 -	244 4 -	6¼
5/ „ 5/6	—	700 -	1 -½	48 10 8	40,481 7 3	Only	recently occu	pied.
4/3	—	40 -	- 1½	54 4 6	19,500 - -	1,587 16 8	533 12 1	5⅜
—	3,531 - 10	141 5	- 6	44 11 4	23,051 18 2	1,635 2 8	479 - 11	5
4/9 to 5/6	—	—	—	*	17,860 8 10	681 12 6	259 18 5	2⅝*
—	—	300 -	1 6	44 - -	9,852 6 3	1,245 7 11	683 1 7	5¾
—	—	90 -	- 8½	43 8 4	18,306 1 3	1,778 16 -	674 9 11	6
—	—	—	—	—	142,798 14 6	8,015 1 8	3,029 4 5	—
5/ to 5/8	2,263 7 1	90 9	1 1	38 - -	6,371 4 1	498 4 4	139 6 4	5⅛
†	2,887 3 -	115 9	- 3½	34 3 4	32,806 4 4	2,911 6 5	979 10 7	5⅞
—	Leased	at full	rent.	Bought ready built.	111 8 2	114 17 6	81 14 7	80‡
—	3,077 9 6	123 -	1 3	37 17 2	7,602 2 5	561 11 9	177 2 6	5
—	—	—	—	—	46,890 19 -	4,086 - -	1,377 14 -	—

13,122*l.* 7*s.* 3*d.*, but not being sufficiently occupied to yield an average net return of 1 per cent.
forty-six families, thereby increasing the cost to 17,860*l.* 8*s.* 10*d.*; and they have now the satis-
gross cost of the experiment, against which they have warned their followers.
80 feet, are let at 6*s.* 6*d.* and 7*s.* 6*d.* per week each.
affect the percentage.

TABLE B—*Contd.*

Average Dimensions of Rooms, Dwellings on Flats.	Average Cubical Contents of Rooms.	Average Dimensions of Rooms, in Cottages.	Average Cubical Contents of Rooms.
	ft.		ft.
Four rooms and scullery— ft. in. ft. in. Liv. 14 – × 10 3 B. 10 3 × 10 3 B. 10 3 × 10 3 B. 7 2 × 9 – Sc. 6 – × 9 – Height........... 8 6	4,013	*Five rooms and scullery*— ft. in. ft. in. Liv. 12 – × 11 – Kit. 14 – × 11 – B. 12 – × 11 – B. 7 8 × 11 – B. 9 – × 6 6 Sc. 11 – × 5 3 Height........... 8 –	4,950
Three rooms and scullery— ft. in. ft. in. Liv. 13 9 × 12 3 B. 11 – × 8 9 B. 11 – × 6 6 Sc. 6 – × 9 – Height........... 8 6	3,316	*Four rooms and scullery*— ft. in. ft. in. Liv. 12 – × 10 – B. 12 – × 10 – B. 12 – × 10 – Kit. 12 – × 10 – Sc. 10 – × 5 3 Height........... 8 –	4,260
Two rooms and scullery— ft. in. ft. in. Liv. 10 2 × 11 – B. 10 2 × 9 6 Sc. 5 – × 6 6 Height........... 8 6	2,048	*Three rooms and scullery*— ft. in. ft. in. Liv. 15 4 × 10 – B. 13 – × 9 – B. 7 – × 9 – Sc. 8 – × 10 – Lob. 7 – × 6 – Height........... 8 6	3,870
One room and scullery— ft. in. ft. in. Liv. 14 – × 10 – Sc. 5 6 × 7 – Height........... 8 –	1,428	*Two rooms and scullery*— ft. in. ft. in. Liv. 10 – × 13 6 B. 12 – × 9 – Sc. 10 3 × 9 – Height........... 8 6	2,849

TABLE C.—*Occupation of Tenants.*

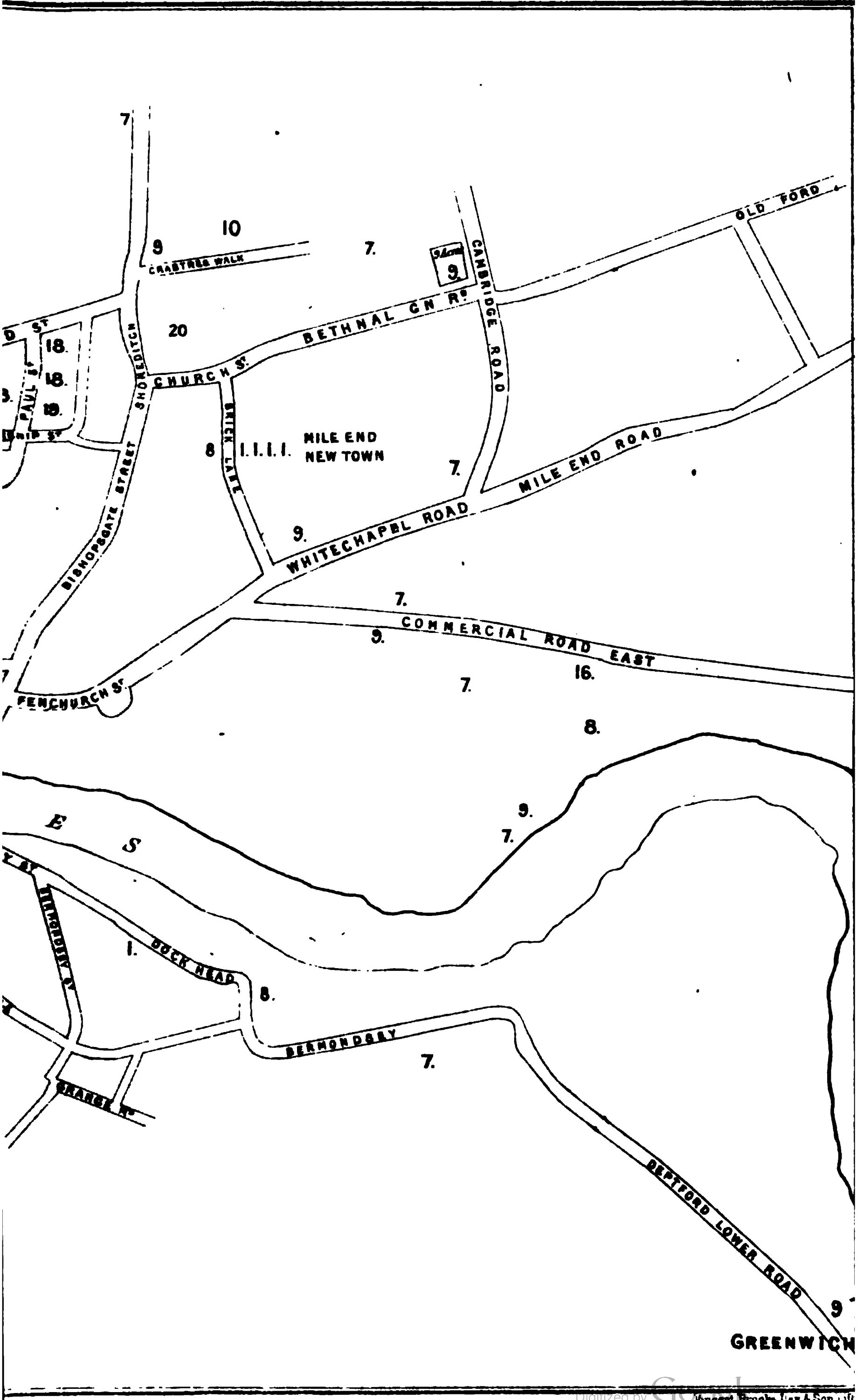
Account book ruler	1	Bailiff	1	Cab proprietor	1
Artists	1	Brewers' servants	13	Cabinetmaker	1
		Bakers	4	Compositors	16
Bricklayers	5	Brushmakers	6	Clerks	10
Booksellers	3	Blacklead maker	1	Cutler	1
Brass finishers	2	Book marbler	1	Cabdrivers	9
Bookbinders	7	Bridle cutters	2	Coachmen	3
Bootmakers	5	Butterman	1	Carpenters	23
Butchers	10	Bath attendants	2	Collectors	3
Blacksmiths	3	Blind maker	1	Commission agent	1
Basketmaker	1	Boot closer	1	Confectioner	1
Butlers	5	Book folder	1	Coopers	4

TABLE C.—*Occupation of Tenants—Contd.*

Carmen	31
Curriers	6
Customs officer	1
Carpet planners	4
Cook	1
Cigar maker	1
Clickers	3
Cloth dresser	1
Coach trimmer	1
Clogmaker	1
Commissionnaire	1
Clock maker	1
Comedian	1
Charwomen	20
Decorators	5
Draymen	12
Detective	1
Dressmaker	1
Dustman	1
Druggists	2
Dyers	2
Engravers on wood	2
Engineers	14
Furriers	2
French polishers	3
Fishmongers	3
Foremen	6
Fireman	1
Gunmakers	5
Glassworker	1
Gardeners	6
Glass cutter	1
Goldsmith	1
Gas meter makers	2
Gatekeeper	1
Grooms	7
Gasfitters	5
Grocers	2
Guard	1
Hatters	2
Hop packer	1
Hall porter	1
Hair picker	1
Ironer	1
Ironmongers	4
Ironmoulders	3
Jewellers	6
Joiner	1
Labourers	40
Laundresses	3
Leather sorter	1
Lithographer	1
Letter sorter	1
Lithographic printers	4
Liftsman	1
Lighterman	1
Mangle woman	1
Missionaries	9
Masons	3
Machine fitter	1
Machine rulers	2
Military ornament maker	1
Metal polisher	1
Miller	1
Messengers	7
Occupation none	5
Opticians	4
Organ builders	2
Plasterers	2
Painters	11
Police officers	27
Pianoforte makers	5
Painter on glass	1
Postmen	3
Porters	20
Printers	11
Paper stainers	2
Pensioner	1
Packing-case makers	6
Pocket-book maker	1
Printers' roller maker	1
Packers	2
Potman	1
Plumbers	2
Railway inspectors	3
Railway servants	8
Railway platelayer	1
Shoemakers	6
Shopman	1
Sempstresses	7
Saddlers	3
Sugar refiners	10
Sailor	1
Stone masons	2
Stokers	2
Stationers	2
Scalemaker	1
Saw sharpeners	1
Schoolmaster	1
Ships' stewards	2
Shop keeper	1
School-board visitor	1
Shell cleaner	1
Soldiers	6
Sawyer	1
Scavengers	5
Scripture reader	1
Straw-hat maker	1
Sewing-machine makers	2
Silver-lace maker	1
Tailors	56
Travellers	3
Turner	1
Tinplate workers	11
Tobacco cutter	1
Trimmer	1
Tie maker	1
Tailoresses	2
Tanner	1
Tailors' cutters	2
Upholsterers	2
Wood carver	1
Wheelwrights	3
Whitesmiths	3
Whipmaker	1
Waiters	4
Watchmakers	2
Warehousemen	48
Widows	25
Watchmen	4
Wire-drawer	1
Watch engravers	2

Index to the Annexed Map, showing the Agencies by whom the Dwellings have been Provided, and the Localities of the Buildings.

1. Metropolitan Association for Improving the Dwellings of the Industrious Classes.
2. Society for Improving the Condition of the Labouring Classes.
3. St. George's, Hanover Square, Parochial Association for Improving the Dwellings of the Labouring Classes.
4. Marylebone Association for Improving the Dwellings of the Industrious Classes.
5. Strand Buildings Company.
6. Central Dwellings Improvement Company.
7. London Labourers' Dwelling Society.
8. Trustees of Peabody's Gifts to the London Poor.
9. Improved Industrial Dwellings Company.
10. The Baroness Burdett Coutts.
11. C. J. Freake, Esq.
12. William Gibbs, Esq.
13. Corporation of the City of London.
14. Countess Ducie, J. Ruskin, Esq., and others.
15. Right Hon. Russell Gurney, M.P.
16. W. E. Hilliard, Esq.
17. G. Newson, Esq.
18. Mr. Matthew Allen.
19. Sir Sydney Waterlow, Bart., M.P.
20. W. H. Hall, Esq.
21. Mrs. Harrison.
22. Miss J. Ogle.
23. G. Cutt, Esq.
24. J. H. Bedford, Golden Lane, Old Street.
25 Brewers' Company.
26. Duchy of Cornwall.
27. Miss Octavia Hill.
28. C. Gatliff, Esq.



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DISCUSSION *on* MR. CHARLES GATLIFF'S PAPER.

MR. ELLIOTT said he received yesterday from his factor in Scotland, some plans of what was considered to be the best class of cottage for agricultural labourers there. He was sorry to say, however, that the cost of these cottages disagreed somewhat with the price per room of cottages in the country, which was stated in the paper. He found that a cottage on his property, such as was considered sufficient for the necessities of the case, could not be built at a less rate than 166*l.* or 167*l.* per cottage, exclusive of the carriage of the materials. There were four rooms, a scullery and a dairy, a garden at the back, and a piggery. The cottages recommended to him had only skylights to two attic rooms; but he had another plan of some cottages erected by Lord Minto, with windows instead of skylights, which would add 10*l.* to the expense of each cottage. He had lately inspected some of the cottages on his property which had been condemned, and he was very much struck with the fact that the people in those cottages were as healthy as any other people on his estate. When he came to London, he asked his physician the reason, and he attributed it entirely to the ventilation caused by the old houses being thatched. He thought this a very important circumstance, because there were very great evils arising in the country from the fact of the landlords being induced to do away with such thatched cottages, and either to displace them by a smaller number, or to disband them altogether. The result of this was very serious, because, when a ploughman or agricultural labourer died, his family were forced into the town; whereas formerly they could have got one of these cottages, which, although poor-looking and thatched, enabled the family to be brought up in a healthy way. Each of the cottages contained an agricultural labourer's family and a woman who worked every day on the farm, and they were let at 1*s.* 6*d.* a-week. The labourers had grass for a cow, and certain allowances of meal and potatoes. Their wages were somewhat less than 1*l.* per week. He hoped that improved dwellings would lead to that improved morality which the lecturer thought would naturally follow. He was sorry to say from inquiries he had found that in Scotland this decrease in immorality had not occurred; but he was afraid this was a rather desponding view of the case, and did not wish to use it as an argument against putting up better dwellings.

The PRESIDENT said that, although the Society was very much obliged to Mr. Elliott for the observations he had made, it should be borne in mind that the question mainly before the meeting was that of model lodging houses for London and the immediate suburbs. The question of cottages in the country was only an incidental one. He hoped the time would come when, responding to the invitation of the Society to compete for the Howard Medal, or in some other way, some prize essay would deal with the subject of country cottages. He would, in the meantime, however, ask the speakers to confine themselves as nearly as may be, to the subject of the paper which had been brought before them.

Mr. PURDY wished to know what the author meant by the size of a room?

Mr. GATLIFF said that the dimensions given in the paper were, for the room in which the family lived, 14 feet by 10 feet 3 inches; bedroom 10 feet 3 inches square; a second bedroom, the same size; a scullery 6 feet by 9 feet, 8 feet 6 inches high. For a set of five rooms the total cubic space would be 4,013 feet for each family; for three rooms, 3,016 feet; and for two rooms, 2,048 feet.

In answer to Mr. Dudley Baxter, Mr. GATLIFF said that the average rent for a family occupying four rooms would be from 6*s*. 6*d*. to 7*s*. per week.

Mr. CORNELIUS WALFORD said he had worked out the figures since he had been in the room. Taking the figures in the first table, 163*l*. would give, per family, 34*l*. 4*s*. In each family it seemed there were 4⅗ persons, or close upon five. 163*l*. being the cost, the rent would, at 5 per cent. per annum, bring 48*l*. 3*s*. Therefore, it seemed to him the rent was very small, being only about 3*s*. 4*d*. per week. He believed those figures would stand investigation. He found the cost in Scotland was about 166*l*., being only 3*l*. in excess of the figures given in the paper. He should like to ask the author what was his practical experience of the class of persons who applied for the dwellings, and whether he thought a lower class of persons would be disposed to occupy them if they were allowed to do so?

Mr. DUDLEY BAXTER said that Mr. Walford had rather interrupted him in his remarks. What he (Mr. Walford) had said, had introduced into the statistics on the matter a most wonderful confusion, because Mr. Gatliff had said—and no doubt correctly—that the average amount of rent for a family having four rooms was from 6*s*. 6*d*. to 7*s*. per week, while Mr. Walford had worked it out to be about 3*s*. 6*d*. Mr. Walford's allowance of 4½ or 5 per cent. would, no doubt, pay the interest; but he should remember there were all the expenses of building, besides rates and taxes and repairs, which should be taken into account. He (Mr. Baxter) thought that 7 per cent. instead of 5 should be looked for as the interest on the capital. He therefore thought that 6*s*. 6*d*. per week should be taken as the net average rent. He should like to know from the author what was the income of the class of persons who occupied the houses, because he thought that, even for London, 6*s*. 6*d*. or 7*s*. was a pretty high rate. It was well known that a family with an income of only 12*s*. or 15*s*. per week was subject to a very much greater mortality than a family with an income of 24*s*., so that full allowance should be made for that. The object of these dwellings was not so much to benefit the upper strata, such as clerks or skilled artisans, as to afford benefit to the unfortunate classes; and therefore the question of what was the average income was a cardinal question on which the whole of the discussion, and the whole of the conclusions that were to be drawn from it, would hang.

The Rev. WYATT EDGELL said he had often asked the lower classes why they did not resort to model lodging houses, instead of paying such a high rent as 4*s.* 6*d.* for a single room, or 5*s.* for two rooms, in the worst part of London, and they complained that these model lodging houses were occupied by clerks, or by a higher class of persons than seemed originally to have been intended for them. There was consequently a certain degree of restraint to which they would be subjected, which they did not like. Some of them also seemed to think that the rule for registering their coming in at night was too stringent, for although a man might be respectable, he did not care to be under such a degree of control.

Mr. EBENEZER CLARKE said he had gone into the question of cottages, and called attention to the fact that, at the Exhibition of 1862, a cottage was erected, the plan of which was adopted in various parts of the country. He and a relative had built eighteen on the same principle at Walthamstow at a cost of 3,000*l.*, or at about 170*l.* each, including the freehold land. They were built in semi-detached cottages, and let to families at 5*s.* a week, and brought in a gross income of 234*l.*, the rates, taxes, and repairs amounting to 54*l.*; so that, after paying all expenses, 180*l.* was left, or 6 per cent. upon the capital. As a test, the cottages, when ready, were advertised in "Lloyd's" newspaper on Saturday, and by 9 o'clock on Monday morning there were no fewer than ninety applications for them. They were thus enabled to select their tenants, and although many of them had not, at that time, the railway accommodation that was now afforded, still many of them came readily from Spitalfields to take these houses. There was no difficulty in letting these cottages, in fact they were always let. During the first three years the sum of 5*l.* covered the whole of the loss resulting from tenants going in and out, and this out of something like 600*l.* received in rents. He believed in the principle laid down by Mr. Gatliff, that in order to make the building of these cottages a success, they must be built on a principle commercially sound. The plan Mr. Gatliff had given was, he thought, an exceedingly suitable one for London. He liked to see every man having a garden, to cultivate which he could get up at 5 to 6 in the morning, and have the advantage of fresh air and a cottage of his own. It was a great advantage to give everybody a cheap house, and at the same time it was an advantage to the capitalist, because capital invested in good freehold property paid very well. Such investments of capital also did real good. A house, if placed in a proper neighbourhood, improved not only the order and cleanliness, but also the morality of the inhabitants.

In a city like London there was a great demand for such a house as Mr. Gatliff recommended, as also in the suburban districts.

Dr. Ross thought that the question of the comparative value of urban and suburban dwellings was a most important one. He thought it could not be denied that suburban dwellings were very desirable when artisans could be induced to live in them. Considerable attention has been given to the subject by Mr. Gatliff, Mr. Pearson, the city solicitor, and himself, some eighteen years ago, when the question was first mooted in the city of London, although nothing was really done then in the way of improvement. Considering that the population of London increased at the rate of 40,000 a-year, it was obvious that houses outside London must be built to accommodate that population; but, on the other hand, while this was done, what was to become of the poor, miserable, wretched outcasts that were living in the centre of London, and who must live near their work? Before any practical work was done in that direction, the dilapidated, dirty, and unwholesome places must be pulled down, and on their sites new and wholesome houses built. It was questionable to what extent disease was lessened and mortality diminished among the persons living in the dwellings over which Mr. Gatliff presided. Much of that improved state of things was no doubt due to the means of the inhabitants and their ability to provide themselves with more comforts than the lower classes. On the other hand, however, he might state that he had found that the mortality in a block of houses erected by Lord Shaftesbury's Committee was just the same as in Mr. Gatliff's—not more than 16 per thousand; whilst in the surrounding houses, inhabited by the same class of persons, the mortality was more than double; and for the simple reason that, whilst the new blocks were adapted for the preservation of health, the surrounding houses were uncomfortable, rotten, and full of disease, which caused sickness. It was not always amongst the very poor, however, that the lowest mortality prevailed. This, he thought, was attributable to the fact that many of the children of the lowest class—notably the Irish—lived a great deal in the open air.

Mr. Edward Hall thought that so long as the fallacious view existed that workmen in London should live in the neighbourhood of their employment, there would not be so much progress made in the solution of the question as was desirable. In building houses in London, he thought that the height of the buildings should be restricted to what was necessary for the healthful width of the streets. Although it was necessary for a certain number of workmen to live in the vicinity of their employment, still he thought there was a greater number who might live at greater distances. He thought that no further proof was necessary that there ought to be improved plans for dwellings, as the question had been solved by Mr. Henry Roberts years ago; but it was necessary to correct the view Mr. Gatliff himself had taken, namely, that ground may be occupied to almost any extent, and any amount of storeys built, provided the plans were good. He thought that if rapid communication could be obtained between the residence of the working man and his place of employment, the whole question would be solved. A great portion of the difficulty had been get over by the facilities of transit afforded by the Metropolitan Railway, but further improved street communication was also necessary. He thought that all the large manufactories should be removed to the outskirts of London, and suitable dwellings for the workmen built in the immediate neighbourhood. This had already been done in some instances in London, and the system had been adopted in Lancashire and Yorkshire years ago, and had been attended with great advantage to employers and employed. This was a point which might well be considered by those who discussed the question in Parliament.

Mr. **FRANCIS SAUNDERS** begged to submit that the death rate was entirely fallacious, inasmuch as a considerable number of the inmates of those model lodging houses died in the hospital. If this had been taken into account, Mr. Gatliff would have arrived at a very different result.

Mr. **ROBERT RAWLINSON**, C.B., said he had given a great deal of attention to the question of improved dwellings. He had heard a great deal that evening on the subject, and a good many plans had been brought before the meeting. He thought that in the arrangement of dwellings, either in the town or country, a proper house should be erected detached from the building, and provided with all the modern appliances for washing, drying, mangling, and ironing common to all the inhabitants, who could arrange for its use on different days of the week. This could be done at a less cost than giving a room to each block of the tenements, and would afford increased facilities and prevent the turmoil of washing. He did not think that there was any necessity for such an amount of ornament, as was sometimes added, to the neglect of comfort. It almost made his heart ache, when he read in the "Times" of that morning a statement in a leading article, that it was not possible to provide tenements at less than 300*l.* each. Instead of 300*l.*, he had no hesitation in saying that, by such an arrangement as he suggested, namely, providing separate buildings for washing and all the operations of the household, nice roomy tenements might be built in the country, where land was cheap, at a cost of from 100*l.* to 110*l.* In making these improvements, there was a good deal to contend against. There was opposition sometimes where it was least to be expected. The managers of the Shaftesbury estate, at Clapham Junction, were at the present time in litigation with the District Board as to the system of drainage adopted upon the estate. He, as an engineer, and as having executed more sewerage and drainage than any other man in England, could say that the Shaftesbury estate managers had adopted the only system which ought to be adopted for that class of property. It was monstrous that they should be exposed to such persecution. Referring to such class of buildings as the Peabody and the Waterlow buildings, he really hoped that the public would see that the populations of the great cities and towns could not afford to wait for all that class of improvement, however beneficial it may be, and that an enormous amount of good may be done by improving such existing properties of the very worst kind, as were capable of being improved without pulling them down, and allowing the people to live on the site occupied previously in the improved dwellings, where they would have cleanliness and a proper water supply and ventilation. He hoped that the question would be taken up in earnest. If ever anything in the shape of charity was to be done, that was to say, if he was bound to pay a sovereign and to get the least possible amount of interest for it, let it be paid in rates, or in any other way, for the purpose of erecting improved model dwellings, as he did not agree with the "Saturday Reviewers," that if a shilling was to be given to a cottager in the shape of improvements on his cottage, it was as bad as giving it in money. Improvement in regard to the dwellings of the poor must come from the upper classes. It was no use telling the wretched dwellers in these habitations that they should improve; they could not. He could point out to Boards of Guardians and Municipal Bodies that they pay the rents of large blocks of houses many times over in the shape of out-door relief in fever and pauper cases; and he had shown over and over again, by calculations in his reports, that if they had had power to rase certain properties to the ground and to build other cottages, it would have been a great saving to the parish and a benefit to the nation.

Mr. VIGERS said he begged to tender his thanks to Mr. Gatliff for his able paper, and to the Society for setting the subject in motion; for he was quite sure that it was one that was as yet in its infancy. As he had the privilege of representing the Peabody trust, he took every opportunity of attending meetings of that kind. He thought Mr. Gatliff's paper gave a very great deal of valuable information, and useful hints upon which he would endeavour to act. He thought working men should live as near as possible to their employment. The death-rate showed that many of the new dwellings in town were healthier than many of the houses outside London, where they were built, perhaps, in low swampy neighbourhoods, instead of being on the dry gravel soil which was characteristic of London. It was better that the working men should live in houses near their employment, because, living at home with their families and dining with them, they could save their money and be spared the necessity of entering public-houses. As to the question of the wages affecting the death-rate, there was, no doubt, something in it; but the Peabody houses were let to a different class of men to those of other institutions. If a man, asking admission to the Peabody houses, was found to be earning 30*s.* a-week, he was not eligible; but if a man was earning only 18*s.* to 20*s.*, and on that account was refused admission elsewhere, the Peabody trust would receive him. It was the duty of the secretary of the fund to find out where the applicant was working, and what he was earning. In regard to the size of the rooms, 12 feet square and 9 feet in height was the average size of the Peabody room. Some were larger, but when they got beyond 9 feet in height there was no advantage to the tenant, because a greater space was given him than he could afford to keep warm in the winter time. As to building very lofty buildings in streets, he thought that that was a very objectionable thing, but he could not call to mind any of the institutions that adopted that plan. The rule of the Peabody trust was never to cover more than one-third of the area of the land purchased. Two-thirds was left for recreation space, which was one of the greatest benefits that were conferred upon the inmates and the public at large. If the labouring classes were to be improved, the welfare of the "rising generation" must be looked to. If, by means of recreation grounds or open spaces, the children were kept out of the public streets, the seed was sown for a better class of men. He hoped that in any new Act of Parliament that might be brought into the House, it should be stipulated that where buildings of five, six, and seven floors in height were erected, the street should be left as wide as the building was high. He would draw the attention of the meeting to concrete buildings. The trustees of the Peabody estate thought it was right and proper to inquire whether they could reduce the cost of building, and he would give some figures in reference to the cost of concrete buildings at Bermondsey, now almost finished. There were six blocks of buildings, three floors in height, with twenty-four rooms in each block. [In dealing with rooms, he only took into account those that were let.] On each of these floors there was a large laundry, and all sorts of appliances, but these were not called rooms; they were part of the rooms that were let; so that, in giving the cost, he had taken eight rooms on each floor, with the laundry, stores, and all sorts of appliances additional. The six blocks contained in all 144 rooms. The contract was 6,300*l.*, which gave 44*l.* per room. The houses were thoroughly well built. In fact, they were blocks of concrete, of which stairs, floors, and everything else, were made. There were many advantages accruing from this. The walls and floors were cemented all over, and there was not the slightest space left by which any vermin or disease could get into the building. The floors were easily cleansed; the noise in one room could not be heard in the other, and when water was spilt in one room it could not run through to the one below. These houses, which were situated in East Lane, Bermondsey, were well worth a visit from any one interested in the subject. He ought to add, that the houses may have cost more than they otherwise would from the fact that the first contractors, who were a limited liability company, liquidated, and the trustees were obliged to call in the aid of Messrs. Cubitt and Co. to finish them.

Mr. H. D. Pochin said he was glad of the success which had attended these model dwellings. In Salford some years ago, having obtained sufficient information from London to enable them to proceed, he and some others set about building dwellings similar to those erected in London. A piece of land unbuilt upon was obtained in the centre of Salford, a careful architect was employed, and great care was taken not to spend too much on ornamentation. He was sorry to say that after five years' experience they had not been induced to repeat the experiment, nor had they been enabled to induce their friends to take up the matter, simply because they had not been able to obtain more than 3 per cent. on the outlay. He was afraid that would be the experience of other people who attempted the erection of model dwellings out of London. Mr. Gatliff had spoken of the large number of people he was able to put up in a limited area. This alone, he (Mr. Pochin) believed, was the secret of Mr. Gatliff being able to make 4½ per cent., while in Salford, under exceedingly favourable conditions, only 3 per cent. could be obtained. He considered Mr. Gatliff's figures very satisfactory, and he thought there was nobody but would come to the conclusion that London was immensely indebted to those gentlemen who had taken the initiative in erecting those model dwellings all over London. He agreed with Mr. Hall that the manufactories should be removed outside London and houses of a good class erected around them. It was more economical to carry a manufactured article into London, than to carry the people backwards and forwards to make that article. With regard to dwellings in country districts, the dwellings referred to by the author were not at all suitable for the country. Where land was cheap people wanted accommodation that these improved dwellings did not give them. The dwellings of the working classes had of late been very much improved. There had been combinations of manufacturers on the one hand and of workmen on the other, but the result had been that whereas six or seven years ago cottages were never built at a cost of more than 100*l.*, there had been few manufacturers within the last few years who had not built cottages that cost 150*l.* or 160*l.* He had been instrumental in building not hundreds, but thousands of such cottages. Let manufacturers compete with each other in giving to their artisans the best cottages possible; and if Mr. Gatliff would only press forward and impress upon the public the importance of building such cottages as those to which he had referred in London, he felt sure that the work of improving the dwellings of the poor would in future go rapidly forward more than at present.

Mr. LUMLEY, Q.C., protested against the subject being considered purely in regard to artisans and working men. The more dilapidated and miserable parts of London were inhabited, not so much by labourers and working-men as by poor people of a lower class, such as old women fallen into poverty and distress, for whom places out of London would be unsuitable. This class could only be provided for by the system contemplated by the Government, namely, that there should be no beneficial result further than providing good and sufficient dwellings for them.

Mr. GATLIFF, in reply to the several speakers, said that in a list which would be appended to his paper it would be found that out of the 770 tenants in the buildings there were only 10 clerks. In reference to the remark made by Mr. Edgill as to registering the time the inmates came in at night, such was not the case. A lodging-house for single men was kept open twenty hours out of the twenty-four. In reply to Mr. Baxter's question, the average rate of wages was 28*s.* or 30*s.* a-week. Mr. Saunders had said that many of the dwellers in these houses died in hospitals. He (Mr. Gatliff) was not aware of anything of the kind. On the contrary, the only complaint his trustees made at times was that in one of their buildings adjoining Guy's Hospital some of the tenants came to reside that they might be near the hospital, and unfortunately died in their buildings.

The PRESIDENT said that before he would ask the meeting to return the usual vote of thanks to Mr. Gatliff, he would add one word in regard to the occupants of those houses. He himself had thought it extremely likely that a considerable number of the occupants would have turned out to be artisans and clerks and persons of that class, but on referring to the table he found the entry, "labourers, 40; heads of families, brewers' servants, 13; bricklayers, 5;" and so on; so that although a great number of them were artisans in the proper sense of the term, there was also a great number of out-door labourers. Referring to the remark made by Mr. Saunders, that many of the occupants of these model lodging houses died in the hospitals, he (Dr. Guy) thought that that remark would apply more to houses of a poorer and more inferior character. He thought it was quite possible to provide single rooms, with some comforts attached, for very poor persons of a certain class, particularly laundresses and persons of that order, but at present it would be impossible to provide a cheap dwelling for the class whom it was most desirable to raise out of the mire. He referred more particularly to the low order of Irish with whom it was very difficult to deal. Experience had shown that even when they were provided with the decencies of life, they did not care to take advantage of them. Unless the morals and habits of this class were raised there was no use providing decent houses for them. A good work was done if houses were provided for those that could afford to pay the requisite rental, and who wished to separate themselves from the inferior class, and to have a chance of living a better and more wholesome life than they did at present. The morals of the lower classes might be raised, but it would be, he was afraid, a very slow process. He would propose a hearty vote of thanks to Mr. Gatliff for one of the most important papers ever placed before the Society, and one that had led to a most interesting discussion. The comments made by the various speakers had been of the greatest possible value, and he was quite certain that when the matter came to be practically discussed in the House, the observations made at the meeting that evening would have their due effect on everybody who addressed himself to the subject.

The FUTURE *of the* UNITED STATES.

By GEORGE WARDE NORMAN, ESQ., F.S.S.

[Read before Section F, British Association, at Belfast, August, 1874.]

THERE probably never existed upon earth a nation so favoured by Providence as the Anglo-Americans.

The earliest settlers, the marrow and kernel of the people, were emigrants from England—then, with the exception of Holland, the freest of all European countries. They were well educated and law-abiding, and brought with them a portion of that noble blood which had recently produced a Shakespere and a Bacon, along with the splendid group of statesmen, warriors, and poets which sheds such a halo of glory over Elizabeth's days. Their religious feelings, strong and on one side exaggerated, led them to persecute, as they had been persecuted in the land of their birth.

One colony was planted after another, each with something in laws and Church governments to distinguish it from its fellows; and no attempt was made to combine the various colonies into one whole, with laws in common and a centralised system of rule. There never was a viceroy of British America, and every colony governed itself, with little interference from home, as it deemed most consonant to the common weal. The law of England was supreme, wherever it was not changed by the local legislatures.

It is true that the Dutch founded New York, and that the Swedes made an attempt at colonising the New World, but these feeble efforts produced no other results than the existence of a few families, among whom that of Van Rensalear may be specially mentioned, whose names still attest their Netherlandish origin.

The long continued wars between France and England brought the American colonies into prominent notice. They had to take part in the contest. Their soldiers mainly captured Louisburg. The chances of success to the Gaul were finally extinguished on the heights of Abraham.

The united effects of effort, of peril and of victory, had much to do with making the Anglo-Americans feel themselves to be a nation. Their wealth and population rapidly increased, and it soon became certain that their allegiance to the British Crown could not be of long duration.

Looking to the immediate cause of the war of independence, it cannot, I think, be denied that the British Parliament, in the resolution to legislate for the colonies, followed precedent, and exercised what it believed to be its good right. The position of England, in a legal point of view, was, I think, better than that of the North against the South during the late civil war—but "inter arma silent leges," the strongest finally succeeds, and thus it was in the contest between Great Britain and her colonies.

In this conflict it may be remarked that the former was most unfortunate in her generals and statesmen, but, after all, the immediate result might have been altogether different had it not been for the interference of France and Spain.

At any rate, a separation sooner or later would have been inevitable, and happy it was for all parties that this took place when it did.

We may now pass to a consideration of the physical advantages under which the Anglo-Americans as a nation started into existence.

They were planted in a vast territory, with a climate varying from that of the Arctic zone to the tropics. Hardly a plant or an animal advantageous to man, but could be reared on some part or other of this wide expanse; much of it is of almost matchless fertility. Mines of the precious, as well as of the more useful, metals abound. Coal measures of such extent, that those of England are, when compared to them, like Shooter's Hill placed side by side with Mont Blanc. Finally, there is a water system such as does not anywhere else exist upon earth, unless it be in China, or perhaps in South America.

We may add to this summary of physical advantages possessed by the Anglo-Americans, that the original possessors of the land were chiefly a few tribes, many of them nomades, who could oppose no effectual opposition to the expansion of the white invaders. These have gradually died out or have disappeared in a way perhaps inevitable, but which leaves much to be desired as respcets humanity and justice.

And now for one more remark on the favourable conditions under which the United States have existed and still do exist. Their vast territories contain at present about 40 millions of inhabitants, but could readily, with an improved agriculture, which will come in time, support 400 millions and still not be peopled to the density of England. They may thus for a long time to come escape from the struggle for existence, the hatred of class to class, the comparison between lavish wealth and pitiable want, the conflict of "have" and "get," which is, or will be, the bane of the most flourishing countries of the Old World.

And here it may be remarked also that the United States have never had to engage in foreign war, since the peace of 1783, unless of their own choice and for purposes of conquest.

In truth, they have only had two foreign wars, that of 1812 against Great Britain, and the Mexican war.

But now let us look at the United States under another point of view, that is to say, as respects their political condition.

The peace with England in 1783 found the twelve States of which they then consisted connected by a federal band of the slightest kind, which might at any time be broken, and it became necessary to unite them by something which promised greater strength and durability.

Of course, under the circumstances, a monarchy was out of the question, and had it not been for the previous division into states, the type of Government adopted must have been that of a unitarian democracy, inasmuch as, so far as I know, no instance in history can be found of a people who have voluntarily divided themselves into sections with any kind of success. Indeed, the very idea of such a thing would hardly have entered into any man's mind, so early as 1783.

And here we may remark that a unitarian democracy erected in 1783—of course a despotism of a special form—could not have lasted up to this time, and would probably have ended, after much confusion and bloodshed, either in the rule of a successful military chief or in chaos.

From this sad fate the Anglo-Americans were rescued by the previous division into different states, and with this condition of things the founders of the Great Republic had to deal.

And surely it must be allowed that they exhibited incomparable wisdom in dealing with it. I do not believe that since the foundation of civil society, anything in the way of political legislation can be found at all comparable to the constitution of the United States. As some of its best features, I may allude to the formation of the Senate by a double election, which sends to the Congress a class of men far superior to those who would have been chosen by a direct popular vote, the appointment of the President through the medium of elected voters, the retention of the wild lands in the hands of the Federal Government, and the restraint on the power of the State legislatures to impose custom or transit duties, or to negotiate with foreign powers, while, in other respects, their Legislative power is complete.

The wise men who drew up this constitution expected, however, from it advantages which have not all been retained. Thus they intended that the Presidential electors themselves, selected as the men most capable, should have really chosen the Chief of the State; but these alas! have become mere delegates, simply bound to support the views of their party. Before they meet, everybody knows who the next President is to be, and the candidate pitched upon has usually few of the qualities, moral or intellectual, which his mighty office requires.

In truth, unless in the case of a successful general, the possession of exalted qualities and a high reputation is rather a ground of exclusion. A man so endowed will have been long before the public. His views upon important subjects will perhaps be strong, and have been strongly expressed. He will have created violent antipathies in many quarters; he will probably have excited much opposition, and at any rate will not be considered by the wire-pullers of any party an eligible candidate.

In short, unless in the case of a successful general, great eminence of any kind is a disqualification, and it is painful to compare the early presidents, Washington, Adams, Jefferson, &c., with their successors in recent times.

The influence of ignorance on the part of the masses, with whom power ultimately rests, is shown in the enactment of laws intended to protect what is called home industry. These are perhaps the worst now existing in any civilised country upon earth, and must impose enormous sacrifices upon the nation, which is, however, so rich and flourishing, that their bad effect is hardly felt.

It is not, however, in fiscal matters alone that the ignorance of American constituencies has produced a baleful effect. In some States judges are elected by universal suffrage and poorly paid, and instances have occurred in which a candidate for a judicial appointment has pointed out that he had previously given as counsel an opinion in favour of some interpretation of the law, which satisfied the popular view at the moment.

As a climax of the degradation which may exist under this head in the United States, a judge has been appointed simply to do the dirty work of his employers, and did it. He was no doubt punished when they lost power, but it is pitiable to think that such a thing could have existed.

In some other respects it cannot be said that the moral reputation of the great Republic stands high in the world. The conduct of many States in the Confederation who have repudiated just debts, or paid their creditors in depreciated money, has greatly lowered the credit of the whole union, and for this dishonesty they have dearly paid and are still paying. The enormous expenditure of the civil war might have been defrayed by loans, at moderate rates of interest, had it not been for the taint of repudiation which weighed upon the nation. Thus even now, in spite of an ample revenue, which is rapidly paying off the debt, the price of American stocks in the market is hardly higher than that of France. It ought, however, in fairness to be mentioned that several States have treated their creditors with scrupulous honesty in this respect, and that the collective Union has never been in default.

One of the most striking peculiarities in Anglo-American practice, is that which regards office as the spoil of conqtest. Generally speaking, the election of a new President indicates a change of policy, and involves a cashierment of every placeholder, down to the Postmaster in a country town. In other words, it necessarily involves the substitution of men without experience, for those who, at any rate, have had some opportunity of acquiring a knowledge of their duties. I know not if this rule "rotation of office" as it is called, exists under the government of the separate States as well as under that of the Union; at any rate wherever it exists, officeholders are expected under all circumstances, and especially at elections, to exert themselves to the utmost in the interest of their party.

In England such a state of things can hardly be imagined. In former days all offices here were on a first appointment filled by persons belonging to the ruling party, but these persons were generally left unmolested afterwards, although the ministry was changed. To discharge a government clerk or a custom-house Officer in order to make room for a partisan, would have been considered even in bad times as an act of oppression, which would have brought disgrace on its perpetrators.

In France a practice something like that which exists in the United States, but less strictly carried out, prevails; but for this however there is some excuse to be found in the peculiar circumstances of the country. I presume that, considering the numbers and duties of officials there, no government could exist in which elections were left to the manipulations of Prefects or Mayors of hostile opinions. And then in that country the number of officials is immense, and the desire for place general and exacting.

And here I will remark that simply looking at the present, I cannot regard the government of the United States as at all a paragon of perfection. I consider, for instance, England as being better governed than the United States. Taxation in the former is much lower than in the latter, and is much more justly and scientifically imposed. Justice is more purely administered, and the administration is less tainted with jobbery and corruption.

The government too, of England, is constructed on a system which places it at any given time on a better footing. The ruling body, that is to say the members of the Cabinet, are a committee chosen by the Legislature, and belong to one or other of the great parties which divide the nation, and are almost universally men of marked distinction, greatly superior to the leading officials on the other side of the Atlantic. Then the existence of a crowned

Sovereign as chief of the state, and representing the majesty of the nation, although with little real power, has the immense advantage of removing from the game of politics a splendid bauble, which might otherwise be dangled before the eyes of many an unprincipled but clever adventurer.

What is true of England, as compared with the United States, is also perhaps true of the Scandinavian kingdoms, and possibly of Germany. In these European countries personal freedom is well secured, the laws are good and purely administered, and the taxation, based on sound principles, is wisely and economically expended.

But what are we to think of the future of our Transatlantic brethren? I have already shown, that at any rate from the beginning of the century, the government has retrograded; that the leading politicians are far inferior to their predecessors; that their fiscal laws are bad; and that the general system of administration is corrupt.

Should this state of things continue to exist, the prospect for the future would be dark indeed, but I am fully convinced that it will not continue, and that we may look hereafter, notwithstanding the present gloom, for a brighter day.

My chief hopes arise from the extent to which power in the United States is decentralised. One democratic despotism could hardly have lasted during nearly a century: it would infallibly have broken up. But there never was any other country in which power was so little concentrated; and it is exercised to a considerable extent by the township, the political monad. A certain number of townships form a county, and certain powers are retained by elected representatives of the county. Above these are the state legislatures, until we finally reach the Congress at Washington. Outside all are innumerable corporations and companies, with important powers.

Now it is impossible to imagine that the inhabitants of a township can allow themselves to be deceived and cheated permanently and on system by those who make and repair their roads and discharge other municipal duties. I should believe, too, that the county government was tolerably pure, and that jobbery and corruption became first conspicuous in the State governments, and in that of some of the large towns. The great corporations, however, such as banks, canal and railroad companies, &c., are full of abuses.

And here one cannot but allude to the admirable legislation of the United States, which regulates the disposal and settlement of the wild land, under which new settlements are formed by a sort of self-acting machinery, and gradually grow into new territories and states. Had the wild land remained under the control of the separate States, it would infallibly have been misused and jobbed away, as has happened in some of our colonies.

The non-retention of the wild land in imperial hands, has been the greatest blot in the colonial administration of Great Britain.

An intelligent American once told me that the payment of representatives was the greatest abuse existing in the United States; that it was worse than the election of judges, which I had mentioned to him as most repugnant to English notions of sound policy.

I suppose he was right; the payment of members of the Legislature must foster the existence of a set of needy adventurers, who desire to get into office for the sake of the salary and of any emoluments which they may pick up as within the sphere of their functions. It is indeed notorious that the leading men of the nation rarely appear as members of Congress. They are not eligible candidates for a party, and, on the whole, shrink from public life. Indeed, the status of a politician by profession is considered anything but elevated.

There can be no doubt that, as respects knowledge, the home-born citizens of the United States occupy a high place among nations. The public schools are indeed far less perfect and less assiduously attended than foreign eulogists usually suppose. However, on the whole, the Anglo-Americans may be regarded as a well-educated people.

The veneration felt for the constitution inculcated in the public schools is, I think, well deserved, and must be regarded as one of many safeguards against the risk of a violent revolution, from which the States of the Old World have so much to fear. Another safeguard arises from the uniform practice in the United States, of placing the seat of government in some second-rate town.

Here too, it may be remarked that there are few countries in which a popular disturbance is put down more readily and with less compunction than at New York. There, when the public peace is threatened or violated by a mob, the military—usually militia or volunteers—are called out, and use their weapons with a readiness of which the Fenians of London have no experience. It is rather characteristic of Anglo-Americans to be reckless of human life.

But it is the extent to which decentralisation is pushed, and the abundance of unoccupied land, which furnish the great elements of security. There is no vast capital with its millions of population, its contrasts of wealth and poverty, and its hundreds of thousands of a populace ever ready to rise against their rulers; no imperial legislature which may at any time create a despotism or be overthrown by an insurrection, as so often has happened in France and once at Berlin and Vienna.

London, indeed, has not seen hitherto anything of the kind, but the concentration of all power in the House of Commons, with its sittings at Westminster, and the very slight means of protection which it possesses, would appear almost to invite attack from the mob, led by a clever and plausible leader. Then although the British institutions are not centralised after the French fashion, yet our municipalities are feebly constituted, and, in the large towns, themselves open to attack; and it may here be remarked that the tendency of our modern legislation is to place power in the hands of boards and commissioners sitting in London, and overriding local authorities. The project for establishing one municipal council for London, and extinguishing all parochial vestries, boards, &c., I regard as full of danger. It might, somehow or other, usurp the status of a Parisian Commune, and then, after all, the existing evils are not great, for London is about the best governed city in the world.

But to return to the United States. Abuses, no doubt, are to be found in that country which in England could not exist for a single session. The protective system of customs is a glaring instance. This taxes enormously the shipowners, the agriculturists, especially of the west, and consumers of every kind. In truth, it exhibits a maximum of impolicy and injustice. It will not, however, endure. The farmers of the Western States will sooner or later make their interests and their voices heard, and the foul fabric of protection will crumble into dust.

I cannot but hope, too, that the American public will at length perceive that the nation is injuriously affected in its best interests and degraded in the eyes of foreign nations by the low character of the persons whom it elects as its rulers, or places in office generally, and that the wise and good will at length exert themselves to appear in the front and take their fitting place in the conduct of public affairs.

Able and honest Americans, while lamenting the present state of things in their Fatherland, have assured me that when the evil had reached a certain height this would certainly be the case. At present at least no improvement is visible.

It has often struck me as remarkable that political philosophers have so little insisted upon decentralisation, the fractionising of power, in their many schemes for improving the condition of mankind. Nor has decentralisation ever been a popular cry.

The Socialists of the cities of France and Spain have doubtless proposed to establish little despotisms of their own; but this they have done because they have not seen their way to one large democratic despotism.

I doubt, indeed, the possibility of establishing in an old country anything at all like the Government of the United States.

On the whole, there is no country in which the national will, when once ascertained and expressed, will more surely attain the objects at which it aims than in the United States. There, as De Toqueville observes, when the majority has pronounced its opinion, opposition ceases.

The decentralisation of the Government has no effect prejudicial to the development and exercise of the national power. During the late civil war, when the Union was temporarily divided, the armies brought into the field by both parties could hardly have fallen short of a million and a half of soldiers, and that out of a population of perhaps thirty-five millions.

And what shall we say as to the future of the United States? I can see no ground of danger, so long as wild land remains available for a population increasing by its natural growth and also by foreign immigration. There is no imperial legislature, sitting in a vast capital and open at any time to the attacks of a mob. The centres of national life, each of which has the essential attributes of Governments, are numerous and scattered, and would readily oppose by force any revolutionary attempts. Nor do I think it probable that such would occur in so many places at once as to baffle the means of repression.

Socialistic views are not of course confined to Europe, but in a country where it is so easy to obtain subsistence, and even wealth, and where for a long time to come there can be little poverty, there is nothing like the food for discontent which is to be found in Germany, France, or even in England.

To be sure the time will come when the wild lands will become occupied. The next step will be to subject the old and exhausted soils to a better system of agriculture. There is no reason why, instead of growing, as now, 14 bushels of wheat per acre (no more than that of France, with its peasant proprietors and misused soil), the produce should not be double, and reach that of England say 28 or 30 bushels per acre.

After all, no doubt the time will come when the struggle between "Have" and "Get" will become as probable in America as in the Old World, under similar circumstances. There is nothing in republican institutions or in a decentralised system to prevent this, or to render the contest, when it occurs, less destructive and sanguinary.

Let us hope that the increasing wisdom of mankind may find a remedy for a gigantic evil, which, with our present lights, appears so menacing and so unavoidable.

I have subjoined some tables, with which I have been kindly favoured by my friend, Dr. Farr, that contain most interesting and useful statistical information relating to the United States.

APPENDIX.

The United States. Valuation of Property.

[000's omitted.]

Years.	Assessed.			True.
	Real Estate.	Personal Estate.	Total.	Real and Personal Estate.
	£	£	£	£
1870	1,982,956,	852,841,	2,835,797,	6,013,704,
'60	1,394,601,	1,022,311,	2,416,912,	3,231,923,
'50	—	—	—	1,427,156,

Taxation, not National.

[000's omitted.]

Years.	State.	County.	Town, City, &c.	Total.
	£	£	£	£
1870	13,610,	15,549,	26,959,	56,118,
'60	—	—	—	18,837,

Public Debt, not National.

[000's omitted.]

Year.	State.		County.		Town, City, &c.		Total.
	For which Bonds have been Issued.	All Other.	For which Bonds have been Issued.	All Other.	For which Bonds have been Issued.	All Other.	
	£	£	£	£	£	£	£
1870	64,950,	5,624,	31,591,	5,922,	54,224,	11,425,	173,736,

Note.—It has not been thought advisable to attempt a valuation of the property of the general Government. The total of receipts into the national treasury for the fiscal year ended the 30th day of June, 1870, as appears in the report of the Secretary of the Treasury, was 82,251,096*l.*

The national debt, less the amount in the treasury, on the 1st day of June, 1870, as appears in the statement of the Secretary of the Treasury, was 481,312,474*l.* Adding these amounts to the proper columns of this table, the aggregate public income of the country becomes 137,704,087*l.*, and the aggregate public indebtedness 654,374,954*l.*

The dollars have been converted into pounds sterling by multiplying by 0·2. See pp. 10—16 of "Census," vol. iii, 1870.

In the subjoined table, according to the definition of the census superintendent—

"A farm is what is owned or leased by one man, and cultivated "under his care." No farm is counted whose area is less than three acres, *unless* 500 dollars' worth of produce has actually been sold off from it during the year.

"The British farmer is wholly unknown" in America. "The "American farmer is, at least in nine hundred and ninety-five cases "out of a thousand, the owner of the land he cultivates."

The number of persons classified as "farmers and planters" at the Census of 1870 was 2,977,711, of whom 2,955,030 were males, and 22,681 females.

As shown above, the total acreage of land in farms in 1870 was—

Improved	188,921,099
Unimproved and woodland	218,813,942
	£
The "present cash value" of farms was	1,852,560,772
" of implements and machinery	67,375,686

Thus the average area of each farm was 63 acres of improved land, 73 of unimproved and woodland; and the average "present "cash value" of each farm was 622*l.*; of implements and machinery on each farm 23*l.*

Productions of Agriculture as Returned in the Census of the United States (1870) vol. iii, pp. 81—91. [000's omitted.]

	1850.	1860.	1870.
Number of farms (vol. iii. p. 340)	1,449,	2,044,	2,660
Acres of Land in Farms—	Acres.	Acres.	Acres.
Improved	113,033,	163,111,	188,921,
Unimproved, woodland	180,528,	244,102,	159,310,
" other land			59,504,
Present Cash Value—	£	£	£
Of farms	654,315,	1,339,009,	1,852,561,
" farm implements and machinery	30,318,	49,224,	67,376,
Total amount of wages paid during the year, including value of board	—	—	62,057,
Total (estimated) value of all farm productions, including betterments, and additions to stock	—	—	489,508
Orchard products	1,545,	3,998,	9,467
Produce of market gardens	1,056,	3,232,	4,144,
Forest products	—	—	7,362
Value of home manufactures	5,499,	4,909,	4,685,
Value of animals slaughtered, or sold for slaughter	22,341,	42,724,	79,791,

Productions of Agriculture—Contd. [000's omitted.]

		1850.	1860.	1870.
***Live Stock*—**		£	£	£
Value of all live stock		108,836,	217,866,	305,055
Numbers of—		Numbers.	Numbers.	Numbers.
Horses		4,337,	6,249,	7,145,
Mules and asses		559,	1,151,	1,125,
Milch cows		6,385,	8,586,	8,935,
Working oxen		1,701,	2,255,	1,319,
Other cattle		9,693,	14,779,	13,566,
Sheep		21,723,	22,471,	28,478,
Swine		30,354,	33,518,	25,135,
***Produced*—**				
Wheat, spring	bushels	100,486,	173,105,	112,550,
„ winter				175,196,
Rye	„	14,189,	21,101,	16,919,
Indian corn	„	592,071,	838,793,	760,945,
Oats	„	146,584,	172,643,	282,107,
Barley	„	5,167,	15,826,	29,761,
Buckwheat	„	8,957,	17,572,	9,822,
Rice	pounds	215,313,	187,167,	73,635,
Tobacco	„	199,753,	434,209,	262,735,
Cotton	bales	2,469,	5,387,	3,012,
Wool	pounds	52,517,	60,265,	100,102,
Peas and beans	bushels	9,220,	15,062,	5,746,
Potatoes, Irish	„	65,798,	111,149,	143,337,
„ sweet	„	38,268,	42,095,	21,700,
Wine	gallons	221,	1,627,	3,092,
Dairy products, butter	pounds	313,345,	459,681,	514,093,
„ cheese	„	105,536,	103,664,	53,492,
„ milk sold	gallons	—	—	235,501,
Hay	tons	13,839,	19,084,	27,316,
Seed, clover	bushels	469,	956,	640,
„ grass	„	417,	900,	583,
Hops	pounds	3,497,	10,992,	25,457,
Hemp	tons	35,[*]	74[†]	13,
Flax	pounds	7,710,	4,720,	27,133,
Flaxseed	bushels	562,	567,	1,730,
Silk cocoons	pounds	11,	12,	4,
Sugar, cane	hhds.	248,	231,	87,
„ sorghum		—	—	—
„ maple	pounds	34,253,	40,120,	28,444,
Molasses, cane	gallons	12,701,	14,694,	6,593,
„ sorghum			6,749,	16,050,
„ maple			1,598,	921,
Bees, wax	pounds	14,854,	1,323,	631,
„ honey			23,866,	14,703,

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[*] Of this amount, 33,193 tons were dew-rotted, and 1,678 water-rotted.

[†] 53,281 tons dew-rotted; 3,978 tons water-rotted; 17,234 tons other prepared.

United States. Population at the Census Periods,

Ages.	Persons.			Males.	
	1850.	1860.	1870.	1850.	1860.
Grand total	23,191,876	31,443,321	38,558,371	11,837,660	16,085,204
Total at enumerated ages	23,177,591	31,391,810	38,553,210	11,828,487	16,057,314
Ages not stated	14,285	51,511	5,161	9,173	27,890
0 to 5	3,497,773	4,842,496	5,514,713	1,769,460	2,449,547
5 „ 10	3,241,268	4,171,200	4,814,713	1,640,407	2,109,545
10 „ 15	2,890,629	3,720,780	4,786,189	1,473,116	1,900,868
15 „ 20	2,529,792	3,361,495	4,040,588	1,237,680	1,650,012
20 „ 30	4,277,318	5,726,400	6,823,417	2,194,469	2,911,558
30 „ 40	2,825,819	4,021,248	4,877,805	1,490,135	2,129,017
40 „ 50	1,846,660	2,614,330	3,518,644	967,573	1,392,223
50 „ 60	1,109,540	1,585,879	2,244,521	575,685	835,350
60 „ 70	609,926	888,809	1,263,324	309,515	455,754
70 „ 80	257,234	348,890	520,044	127,460	172,563
80 „ 90	77,382	93,552	129,077	36,727	43,790
90 „ 100	11,695	13,778	16,653	5,183	5,854
100, &c.	2,555	2,953	3,522	1,077	1,233
0 to 20	12,159,462	16,095,971	19,156,203	6,120,663	8,109,972
20 „ 40	7,103,137	9,747,648	11,701,222	3,684,604	5,040,575
40 „ 60	2,956,200	4,200,209	5,763,165	1,543,258	2,227,573
60 „ 80	867,160	1,237,699	1,783,368	436,975	628,317
80 „ 100	89,077	107,330	145,730	41,910	49,644
100, &c.	2,555	2,953	3,522	1,077	1,233

United States, Census 1870. *Persons Engaged*

Occupations.	Persons Employed.				
	All Ages.			10 to 15.	
	Total.	Males.	Females.	Males.	Females.
Population, 10 years and over	28,228,945	14,258,866	13,970,079	2,840,200	2,764,169
All occupations (persons engaged in)	12,505,923	10,669,635	1,836,288	548,064	191,100
Agriculture	5,922,471	5,525,503	396,968	426,381	73,177
Agricultural labourers	2,885,996	2,512,664	373,332	426,305	73,169
Farmers and planters	2,977,711	2,955,030	22,681	—	—
Domestic servants	975,734	108,380	867,354	22,598	86,905
Labourers (not specified)	1,031,666	1,010,345	21,321	29,013	3,146

1850-60-70, *Distinguishing Age and Sex.*

Males.	Females.			Ages.
1870.	1850.	1860.	1870.	
19,493,565	11,354,216	15,358,117	19,064,806	Grand total
19,489,770	11,349,104	15,334,496	19,063,440	Total at enumerated ages
3,795	5,112	23,621	1,366	Ages not stated
2,797,257	1,728,318	2,392,949	2,717,456	0 to 5
2,437,442	1,600,861	2,061,655	2,377,271	5 „ 10
2,435,585	1,417,513	1,819,912	2,350,604	10 „ 15
1,989,695	1,292,112	1,711,483	2,050,893	15 „ 20
3,351,617	2,082,849	2,814,842	3,471,800	20 „ 30
2,452,999	1,335,684	1,892,231	2,424,806	30 „ 40
1,829,599	879,087	1,222,107	1,689,045	40 „ 50
1,209,855	533,855	750,529	1,034,666	50 „ 60
658,153	300,411	433,055	605,171	60 „ 70
259,318	129,774	176,327	260,726	70 „ 80
60,042	40,655	49,762	69,035	80 „ 90
6,922	6,512	7,924	9,731	90 „ 100
1,286	1,478	1,720	2,236	100, &c.
9,659,979	6,038,799	7,985,999	9,496,224	0 to 20
5,804,616	3,418,533	4,707,073	5,896,606	20 „ 40
3,039,454	1,412,942	1,972,636	2,723,711	40 „ 60
917,471	430,185	609,382	865,897	60 „ 80
66,964	47,167	57,686	78,766	80 „ 100
1,286	1,478	1,720	2,236	100, &c.

in certain Occupations, Distinguishing Age and Sex.

Persons Employed.				Occupations.
16 to 59.		60 and upwards.		
Males.	Females.	Males.	Females.	
10,429,150	10,257,645	989,516	948,265	Population, 10 years and over
9,486,734	1,594,783	634,837	50,405	All occupations (persons engaged in)
4,650,191	309,699	448,931	14,092	Agriculture
1,996,886	290,822	89,473	9,341	Agricultural labourers
2,599,975	18,025	355,055	4,656	Farmers and planters
81,964	756,445	3,818	24,004	Domestic servants
931,486	16,918	49,846	1,257	Labourers (not specified)

Population of the United States, 1790-1870, *distinguishing White and Coloured.*

Years.	Enumerated Population.			Increase of Population.		
	Aggregate.	White.	Coloured.	Aggregate.	White.	Coloured.
1790	3,929,214	3,172,006	757,208			
				1,379,269	1,134,440	244,829
1800	5,308,483	4,306,446	1,002,037			
				1,931,398	1,555,627	375,771
'10	7,239,881	5,862,073	1,377,808			
				2,393,941	2,000,093	393,848
1820	9,633,822*	7,862,166	1,771,656			
				3,232,198	2,675,212	556,986
'30	12,866,020	10,537,378‖	2,328,642			
				4,203,433	3,658,427	545,006
'40	17,069,453†	14,195,805¶	2,873,648			
				6,122,423	5,357,263	765,160
1850	23,191,876	19,553,068	3,638,808			
				8,251,445‡	7,369,469	803,022
'60	31,443,321‡	26,922,537	4,441,830			
				7,115,050‖	6,666,840	438,179
'70	38,558,371§	33,589,377	4,880,009			

* Excluding 4,631 described as "All other persons except Indians not taxed."

† A second enumeration of Montgomery county, Maryland, added 787 to the population, namely, 487 white and 300 coloured; these numbers are not included above.

‡ Including 6,100 persons on board public ships. § Including 5,318 persons on public ships.

‖ The aggregate in 1860 includes 78,954 persons not accounted for in the census returns under the two heads "*white*" and "*coloured*" population.

¶ The aggregate in 1870 includes 88,985 persons not accounted for in the census returns under the two heads "*white*" and "*coloured*" population.

United States, 1870; *Population at Groups of Ages.*

Ages.	Population.	Ages.	Population.
Grand total	38,558,371	Grand total	38,558,371
Total at enumerated ages	38,553,210		
Ages not stated	5,161	Total at enumerated ages	38,553,210
0 to 5	5,514,713		
5 „ 10	4,814,713		
10 „ 15	4,786,189		
15 „ 20	4,040,588	0 to 20	19,156,203
20 „ 25	3,748,299		
25 „ 30	3,075,118		
30 „ 35	2,562,829	20 „ 40	11,701,222
35 „ 40	2,314,976		
40 „ 45	1,939,712		
45 „ 50	1,578,932	40 „ 60	5,763,165
50 „ 55	1,367,969		
55 „ 60	876,552		
60 „ 65	778,971	60 „ 80	1,783,368
65 „ 70	484,353		
70 „ 75	344,358		
75 „ 80	175,686	80 and over	149,252
80 „ 85	94,602		
85 „ 90	34,475		
90 „ 95	12,671	Unknown ages	5,161
95 and over	7,504		

The MERCANTILE NAVIES *of the* WORLD *in the* YEARS 1870 *and* 1874 *compared.* *By* HENRY JEULA, ESQ., F.S.S., F.R.G.S.

[Read before the Statistical Society, 16th March, 1875.]

WE are indebted to the Administration of the Bureau Veritas for the publication of the "General List of Merchant Shipping of all "Nations," comprising *sea-going* sailing vessels and steamers, so far as information had been obtained.

It is manifest that these volumes, while constituting a most acceptable addition to our knowledge, do not pretend to absolute correctness, and relating only to the sea-going vessels of each country named, of necessity present contrasts with the entire number and tonnage of any given nation.

Allowing for all such elements of disturbance, the area of observation is so wide, and the number of vessels and amount of tonnage so large, as to render a comparative statement not only interesting but valuable.

From the edition of this work for the year 1870, when it was first published, and from that for 1874, the last issued, I glean the following particulars of the remarkable changes which have occurred in the interval, showing how steamers have supplanted sailing vessels, and how marvellously some of the countries enumerated have progressed, relatively, in their carrying power.

The variations between different nations are striking and significant. Thus, American *sailing vessels* decreased 2·22 per cent. in number, but 9·12 per cent. in tonnage; while Austrian increased 12·09 per cent. in number, but only 3·13 per cent. in tonnage; Russian increased in number 9·34 per cent., but decreased in tonnage by 4·28 per cent.; and Swedish decreased by 1·30 per cent. in number, but increased in tonnage by 6·23 per cent.

Those countries which had increased in both number and tonnage of *sailing vessels* were Austria, Greece, Italy, Norway, Portugal, and a few others included in the term "various;" while the countries which had decreased in both number and tonnage were America, Belgium, Great Britain, Denmark, Holland, France, Germany, and Spain.

The *sailing vessels* of most of the nations named in these volumes appear to have become, on the average, smaller, but those of the following countries appear to have increased in size, viz.:—Denmark, Holland, France, Germany, Italy, Norway, Spain, and Sweden.

But now the remarkable contrast occurs between *sailing vessels* and *steamers.*

Every country enumerated had increased in both the number and the tonnage of its *steamers*, in some instances to an almost incredible extent, were it not for the fact that until recently their mercantile steamers had been but few.

It is to be noticed that while the decrease in the aggregate tonnage of *sailing vessels* has been about 80 per cent. in excess of the decrease in number, the increase in the tonnage of *steamers* has been about 200 per cent. in excess of the increase in their number.

The largest relative increase in number of *steamers* pertains to Belgium, Norway, Russia, and Sweden; while in increase of tonnage, Belgium, Denmark, Holland, Germany, Italy, Norway Russia, Spain, and Sweden bear the palm.

The tables I annex are threefold.

First, Sailing vessels. Their nationality, number, tonnage, and average size, in tons, in 1870 and in 1874, with the percentage of each country upon the totals of both number and tonnage at the respective periods.

Secondly, Steamers. A table similar to the above; and

Thirdly. A table showing the *proportionate increase* or *decrease* for each nationality in 1874, as compared with the year 1870.

From this comparison it results that while the aggregate of *sailing vessels* has decreased by 3,229, or 5·43 per cent. in number and 1,518,868 tons, or 9·47 per cent. in tonnage, *British sailing vessels* have decreased by 2,627, or 11·34 per cent. in number and by 1,609,390 tons, or 23·01 per cent. in tonnage; and while the aggregate of *steamers* has increased by 1,233, or 29·84 per cent. in number and by 2,433,456 tons, or 87·11 per cent. in tonnage, *British steamers* have increased by 576, or 23·74 per cent. in number and by 1,364,006 tons, or 82·58 per cent. in tonnage.

Putting *sailing vessels and steamers* together, the aggregate had decreased in number by 1,996, or 3·14 per cent. but increased in tonnage by 914,588 tons or 4·86 per cent.; while *British vessels —sailing and steam* together—had decreased in number by 2,051, or 8·01 per cent. and in tonnage by 245,384 tons, or 2·84 per cent.

The very large increase alike in the number and average size of *steamers*, and the considerable decrease in number and apparent reduction in the average size of *sailing vessels*, with the relative progress of various nations shown in the following tables, seem to indicate modifications in ownership and employment, the full scope and significance of which it may be difficult or, perhaps, impossible at present to estimate, but I trust the subject will be considered of sufficient interest and importance to justify my placing this short comparative paper before the Fellows of the Statistical Society and the readers of its *Journal.*

THE MERCANTILE NAVIES OF THE WORLD.

Three tables compiled from the "General List of Merchant Shipping of all Nations," issued by the Bureau Veritas.

TABLE I.—*Sailing Vessels, their Nationality, Number, Tonnage, and Average Size in Tons, in* 1870 *and* 1874; *with the Percentage of each Country upon the Totals of both Number and Tonnage at the respective Periods.*

Nationality.	Number.		Percentage on Total Number.		Average Size in Tons.		Tonnage.		Percentage on Total Tonnage.	
	1870.	1874.	1870.	1874.	1870.	1874.	1870.	1874.	1870.	1874.
American	7,025	6,869	11·80	12·19	341	318	2,400,607	2,181,659	14·96	15·02
Asiatic	...	35	—	0·06	—	386	—	13,527	—	0·09
Austrian	852	955	1·43	1·70	373	343	317,780	327,742	1·98	2·26
Belgian	72	51	0·12	0·09	363	336	26,148	17,158	0·16	0·12
British	23,165	20,538	38·92	36·48	302	262	6,993,153	5,383,763	43·59	37·08
Central American	—	138	—	0·25	—	338	—	46,580	—	0·32
Danish	1,415	1,239	2·38	2·20	130	140	183,510	173,480	1·14	1·19
Dutch	1,690	1,418	2·84	2·52	263	272	444,111	385,301	2·77	2·65
French	4,968	3,780	8·35	6·72	180	195	891,828	736,326	5·56	5·07
German	4,320	3,483	7·26	6·19	242	246	1,046,044	852,789	6·52	5·87
Greek	1,860	2,063	3·13	3·67	202	197	375,680	406,937	2·34	2·80
Italian	3,395	4,343	5·70	7·72	267	283	907,570	1,227,816	5·66	8·45
Norwegian	3,652	4,464	6·14	7·93	271	302	989,882	1,349,138	6·17	9·29
Portuguese	368	410	0·62	0·73	236	226	87,018	92,808	0·54	0·64
Russian	1,306	1,428	2·20	2·54	265	232	346,176	331,350	2·16	2·28
South American	—	219	—	0·39	—	378	—	82,761	—	0·57
Spanish	3,036	2,674	5·09	4·75	180	191	545,607	509,767	3·41	3·51
Swedish	1,930	1,905	3·24	3·38	176	190	340,188	361,368	2·12	2·49
Turkish and Egyptian	—	277	—	0·49	—	157	—	43,360	—	0·30
Various	464	—	0·78	—	317	—	147,196	—	0·92	—
Total	59,518	56,289	100·00	100·00	270	258	16,042,498	14,523,630	100·00	100·00

TABLE II.—*Steamers, their Nationality, Number, Tonnage, and Average Size in Tons, in* 1870 *and* 1874; *with the Percentage of each Country upon the Totals of both Number and Tonnage at the respective Periods.*

Nationality.	Number.		Percentage on Total Number.		Average Size in Tons.		Tonnage.		Percentage on Total Tonnage.	
	1870.	1874.	1870.	1874.	1870.	1874.	1870.	1874.	1870.	1874.
American	597	613	14·47	11·43	861	1,254	513,792	768,724	18·39	14·70
Asiatic	—	6	—	0·11	—	576	—	3,459	—	0·07
Austrian	74	81	1·79	1·51	599	1,025	44,312	83,039	1·59	1·59
Belgian	14	39	0·34	0·73	746	1,039	10,442	40,536	0·37	0·78
British	2,426	3,002	58·71	55·96	681	1,005	1,651,767	3,015,773	59·13	57·70
Central American	—	9	—	0·17	—	592	—	5,332	—	0·10
Danish	44	67	1·06	1·25	275	582	12,085	38,976	0·43	0·75
Dutch	82	107	1·98	1·99	481	876	39,405	93,723	1·42	1·79
French	288	315	6·97	5·87	739	1,012	212,976	318,757	7·62	6·10
German	127	220	3·07	4·10	827	1,222	105,131	268,828	3·76	5·14
Greek	8	9	0·19	0·17	408	592	3,267	5,329	0·12	0·10
Italian	86	110	2·08	2·05	423	827	36,358	91,011	1·30	1·74
Norwegian	26	112	0·63	2·09	282	456	7,321	51,103	0·26	0·98
Portuguese	18	23	0·43	0·43	729	802	13,126	18,452	0·47	0·35
Russian	62	144	1·50	2·68	458	771	28,422	111,072	1·02	2·13
South American	—	72	—	1·34	—	728	—	52,387	—	1·00
Spanish	148	212	3·58	3·95	492	733	72,845	155,417	2·61	2·97
Swedish	83	195	2·01	3·63	224	397	18,633	77,440	0·67	1·48
Turkish and Egyptian	—	29	—	0·54	—	949	—	27,530	—	0·53
Various	49	—	1·19	—	481	—	23,550	—	0·84	—
Total	4,132	5,365	100·00	100.00	676	974	2,793,432	5,226,888	100·00	100·00

Table III.—*Showing the Percentage of Increase or Decrease in Number and Tonnage of Sea-going Merchant Sailing Vessels and Steamers of each Country named, in* 1874 *as Compared with the Year* 1870.

Nationality.	Sailing Vessels.				Steamers.			
	Number.		Tonnage.		Number.		Tonnage.	
	Percentage of		Percentage of		Percentage of		Percentage of	
	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.	In-crease.	De-crease.
American	—	2·22	—	9·12	2·62	—	49·62	—
Austrian	12·09	—	3·13	—	9·46	—	87·40	—
Belgian	—	29·17	—	34·38	178·57	—	288·20	—
British	—	11·34	—	28·01	23·74	—	82·58	—
Danish	—	12·44	—	5·47	52·27	—	222·52	—
Dutch	—	16·09	—	13·24	30·49	—	137·85	—
French	—	23·91	—	17·44	9·37	—	49·67	—
German	—	19·38	—	18·47	73·23	—	155·71	—
Greek	10·91	—	8·32	—	12·50	—	63·12	—
Italian	27·92	—	35·29	—	27·91	—	150·32	—
Norwegian	22·23	—	36·29	—	330·77	—	598·03	—
Portuguese	11·41	—	6·65	—	27·77	—	40·58	—
Russian	9·34	—	—	4·28	132·25	—	290·80	—
Spanish	—	11·92	—	6·57	43·24	—	113·35	—
Swedish	—	1·30	6·23	—	134·94	—	315·61	—
Various	44·18	—	26·52	—	136·73	—	276·68	—
Total	—	5·43	—	9·47	29·84	—	87·11	—

Discussion *on* Mr. Jeula's Paper.

Sir James Anderson said he hardly knew what the author wished to be inferred from the statistics given, because it appeared to him, that unless the conditions which caused the decrease or increase of tonnage were taken into consideration, no conclusion could be arrived at. For example, a steamer would make three Indian voyages for one sailing ship; therefore the tonnage was at once increased, that is, the tonnage by which the nation benefited. A steamer would now make eight or nine Mediterranean voyages in the year. He had, himself, made eight or nine voyages to America in the same period, whereas two and a half voyages were considered a good year's work for a clipper ship, so that the carrying power and the commerce of the nation might be very largely augmented, although the tonnage might be very much decreased. He thought that the great falling off in America was due to the protective laws of that country. They could not buy their ships so cheap as we in this country could by 30 per cent. For example, at the present moment, he believed that 100 large steamers in this country, could be bought at 25 per cent. less than they would have cost three or four years ago. America could not, on account of her protective laws, take advantage of this condition of affairs, and come to this country and buy shipping; besides they had not recovered from the great civil war. The same might be said of France, which had not recovered from the war with Germany. Therefore, he did not see what was conveyed by the paper. Giving the increase or decrease of tonnage, did not appear to be informing the meeting anything, unless the conditions which had produced these results were taken into account.

Dr. **Farr** said that this was a subject which he investigated some time ago with Mr. Vian, of the Accidental Insurance Company, which had under consideration the advisability of insuring merchant seamen; and they had obtained returns through the Registrar-General. He agreed to some extent with Sir James Anderson that some other element should be introduced to show the significance of the author's statistics; but he could not agree that they were unimportant; as they were facts in themselves. It was a fact that there were so many ships in 1870 and so many in 1874. There was also given the difference in tonnage in those years; and he thought Sir James Anderson would agree with him that that was not an unimportant fact. The tonnage did three times or twice the amount of work in 1874 that it did in 1870. That was a most important fact. This had arisen from the change in the form of shipping from sailing vessels to steamers. There was the same amount of tonnage, but that tonnage carried four or five or ten times as much of cargo as it formerly did the same distance. The usual calculation was a foot per pound. But here another unit was wanted, such as the ton of goods carried per mile or something like that. He did not know whether Mr. Jeula or Sir James Anderson could say if it was possible to introduce such an element as would give the amount of work done. In a scientific point of view that was indispensable.

Mr. **Kennelly** thought the facts contained in the paper must be very valuable. The table showed that the character of the sailing vessel had decreased by a percentage of 5·43 and 9·47 per cent. in tonnage; and there was a large increase of 82·58 per cent. in tonnage, and 23·74 per cent. in number of British steamers, in British sailing vessels there was a decrease of 23·01 per cent. in tonnage, and 11·34 per cent. in number. These were very clear facts, and admitted of no doubt as to the decrease in the carrying capacity of the sailing vessel and the increase in carrying capacity of the steamer. For instance, the Suez Canal was one channel through which the most rapid transit was made from the East to London and by steamer only. The traffic carried round the Cape was chiefly by sailing vessels. There must, therefore, as Sir James Anderson and Dr. Farr had pointed out, be a relative increase of carrying power with the increase of steam-power, because there would be a swift carrier over a short passage making many runs, showing the great increase in the tonnage of the swift vessel over the decrease of the slow carrier over a long voyage, and clearly there must be a very largely increased tonnage carried.

Mr. **Lumley** said he should like to know if the returns were accurate, because on looking at one of the tables he found that in 1870 the Norwegian tonnage was put down at 7,321, and in 1874 at 51,103; and in Russia, in 1870, it was 28,422, and in 1874 111,072 tons. There seemed to him to be an enormous difference between the two periods.

Mr. C. **Walford** said he had recently had occasion to make an investigation into the question of tonnage, for the purposes of a new company, who contemplated insuring passengers by steamers and sailing vessels. He estimated the capacity of steamers to be four times that of vessels for any particular traffic. That rule might not, perhaps, meet the point Mr. Jeula had in view, but it would apply to certain voyages.

Mr. **Jeula**, in reply, said, in reference to the enquiry made by Mr. Lumley as to the correctness of the figures, that the documents from which he had taken them were the only ones available for a comparison of that kind. He was aware that last year the Board of Trade had brought out a statistical abstract in relation to foreign countries; but he had only been able to obtain the abstract up to 1872. As 1870 was the first year in which the work referred to had been published, and 1874 was the date of the last issue, he thought it might be of sufficient interest to take the results as given in that public volume, the contents of which, he thought, were mainly correct. The notable increase in the northern nations in the number and tonnage of steamers and sailing vessels seemed to him so very important that he thought it might not be out of place to call attention to the fact. In reference to the remarks of Sir James Anderson, that gentleman would see that, taking steamers of an average capacity and of average power in relation to the different countries, the table would give a tolerable approximation as to the relation of this country to the rest of the world in reference to steam-carrying power. If one steamer could make three or four voyages, another might do so; and, therefore, it seemed to him that the fact of the tonnage of the world had increased by 87·11, while the tonnage of this country had increased 23·74, was unworthy of notice. In relation to the sailing vessels, the total decrease in number was 5·43, while the decrease in this country was 11·34. The total decrease in tonnage was 9·47, while the decrease in Great Britain was 23·01. These were facts that Dr. Farr would perhaps have no objection to add to the other facts he had mentioned. In reference to the remarks made by Dr. Farr, he (Mr. Jeula) would be only too glad to see some scientific mode adopted for treating statistics of this description. He hoped that any attempt, however humble, to call attention to the statistics of maritime shipping, would not be undervalued.

The President, in moving a vote of thanks to the author, said, that in looking over the tables, he observed that, in nations similarly circumstanced, there was a peculiar similarity in the increase of steamers. This would render it probable that the figures were correct.

MISCELLANEA.

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I.—*Extended Operations of the Registrar-General.*

In the "Weekly Return of Births and Deaths in London and in twenty other large towns of the United Kingdom" (No. 1, 1875, vol. xxxvi., week ending Saturday, January 9th), we have an announcement to which the widest publicity should be given. It is to the effect that:—

> "From the commencement of the present year the weekly return will contain information relating to the births and deaths registered in London and twenty other large cities and towns in the United Kingdom, having an aggregate population estimated to the middle of the year of 7,739,490 persons; and in addition will also be found similar facts relating to an "outer ring" of parishes situated around the registration division of London, of which the estimated population at the same period is 762,007. The population of the entire area within the United Kingdom, embraced by the weekly return as enlarged, will therefore be 8,501,497, or *eight millions and a-half*. With the aid of returns furnished through the courtesy of the various authorities abroad, the weekly return will also contain information as to the deaths recently registered in twenty-four great cities situated in all parts of the world, and containing a population of about *ten* millions."

Some interesting details are added respecting the "outer ring," under the title of that greater London, which includes the whole of the metropolitan and city police districts.

> "London has one of the finest municipal organisations in the world; but it extends over only 668 central acres, with a night population of 74,897. That is the present dominion of the lord mayor: it is a small fraction ($\frac{1}{123}$) of London. The weekly tables take in a wider area, over which parish vestries ruled separately until they were organised under the Metropolitan Board of Works; which has accomplished some great works. But London has now overflown even these limits; the merchant, the professional man, and others having offices in the city and in Westminster live with their families in what has been called "the outer ring," which extends round a circle with a radius of about 15 miles from Charing Cross: it is the greater London. The greater London was first defined by Sir Robert Peel's Metropolitan Police Act, and may be accepted as the London of the future. It is organically associated by a multitude of common wants, and by hygienic conditions; the same zymotic diseases prevail over the whole extent.

Epidemics, like the criminal population, cross and recross the borders of its inner circle. The area is 698 square miles, nearly five times the area over which the weekly tables have hitherto extended; and the population may be estimated at 4,207,167, of which 762,007 live in the outer ring.

"It has been determined to keep up the weekly table including the amplest details of age and cause of death within their ancient limits; in the first place for the sake of comparison, and in the second place because the population is all compact, whereas the outer ring, though consisting largely of urban population, has in it a great deal of open country, interspersed with such towns as Epsom, Croydon, Wimbledon, Kingston, Hampton, Richmond, Kew, Mortlake, Barnes, Beckenham, Bexley, Chislehurst, Bromley (in Kent), Staines, Uxbridge, Brentford, Harrow, Barnet, Finchley, Tottenham, Edmonton, Acton, Ealing, Edgware, Hanwell, Hornsey, Isleworth, Teddington, Willesden, Waltham Abbey, Stratford, East Ham, West Ham, Barking, and Walthamstow.

"The returns from the districts of the outer ring are made by forty-seven registrars; and contain the number of deaths by the principal zymotic diseases, and by violence. The deaths of infants, of persons of the age of 60 and upwards, of inmates of public institutions, and of bodies on which inquests are held are also distinguished. The prevailing diseases in the districts of the outer ring will now be constantly under observation; and this is important, as its sanitary condition is every year becoming more critical. The sewage question remains there for solution; and the water supply is not everywhere satisfactory.

"In the week the births in the greater London were 3,354, the deaths 2,722.

"The annual rate of mortality of the greater London was 34; of the inner London 35; of the outer ring 29. At present the mortality is much the lowest in the outer ring."

II.—*The Death-Rate.*

On the Saturday following the reading of Mr. Humphrey's paper on this subject (see p. 437, part iv, vol. xxxvii), it was brought under the notice of the Society of Medical Officers of Health, of which Dr. Letheby is president.

The discussion was opened by Dr. Stevenson, who read a short paper, on which Drs. Liddle, Buchanan, and others, offered observations. The President and Dr. Guy also took part in the discussion. Frequent reference was made to Mr. Humphrey's paper in terms of great commendation. In the course of the evening a printed paper was laid on the table, signed "G. B.," and attributed to Dr. George Buchanan. In this paper he compared two parts of the kingdom differing much in their social and occupational conditions, and both subject to much immigration though of a different character, yet having a certain resemblance in respect of the number of population. Their birth-rates differ as 38 and 32, and their death-rates as 27 and 19. The year selected was the census year 1871, which, in regard of both births and deaths, was an average in both the selected districts.

The paper comprises three tables, of which the first presents the census for 1861 and 1871, of the two contrasted populations, their annual increase, whether by excess of births over deaths, or by excess of immigration over emigration, and the rates per 1,000 both of births and deaths.

Table II distributes the two populations according to age, and compares their respective death-rates. The rural population is, on the whole, an older population, but its death-rates for every age are less than those of the urban population.

In Table III, the death-rates prevailing in 1871 in the south-eastern registration division at the several ages, are applied to the Lancashire census population at those ages, and conversely the death-rates prevailing in 1871 in Lancashire at the several ages are applied to the south-eastern census population at those ages; with this result, that the death-rate for every age continues to be in excess: in Lancashire there is no exception to the rule.

We append this table, with the author's concluding remarks. We have made no alterations in the figures, and little in the wording.

	1	2	3	4
	Lancashire, 1871.		South-Eastern Division, 1871.	
Age Periods.	On Lancashire Death-rates the Number of Deaths was	On South-Eastern Counties Death-rates the Number of Deaths would be	On South-Eastern Division Death-rates the Number of Deaths was	On Lancashire Death-rates the Number of Deaths would be
0— 1	20,687	12,496	8,572	14,188
1— 5	15,567	7,025	5,055	11,536
5—15	4,847	3,227	2,518	3,759
15—25	4,731	3,344	2,417	3,421
25—35	5,624	4,195	2,943	3,921
35—45	5,678	3,976	2,896	4,085
45—55	5,912	3,748	2,917	4,555
55—65	6,284	4,038	3,645	5,581
65—75	5,683	4,022	4,591	6,505
75 + ...	3,739	3,218	5,268	6,122

Adding up the figures for Lancashire, as thus obtained (col. 2), there results the number 49,289, which gives a death-rate of 17·30 per thousand on the census population of Lancashire; a death-rate less by 10·34 per thousand than the actual death-rate at all ages of Lancashire in the year 1871. And, adding up the figures for the south-eastern division (col. 4), there results the number 63,673, which gives a death-rate of 29·37 per thousand on the census population of that division; a death-rate greater by 10·54 per thousand than the actual death-rate at all ages of the division in the year 1871.

III.—*Joint Stock Banks.*

Messrs. Whiteheads and Coles have issued their usual analysis of the accounts published by the leading joint stock banks (fifteen in number) for the half-year ending 31st December, 1874, from which it appears that their

	£
Paid-up capital amounted to	12,601,593
Reserve fund „	4,131,411
Current deposits account Acceptances } „	125,714,632
Profit and loss balance „	1,304,924
Making a total of	161,279,636

Under the head of Assets, we have the following figures:—

	£
Cash in hand at bank and at call	26,111,317
Investments	18,201,362
Bills discounted and loans	114,852,007
Premises and preliminary expenses	1,912,549
Making a total of	161,279,636

The following are the banks included in the list:—

Alliance, Limited; Bank of Egypt; Central London, Limited; City; Consolidated, Limited; Imperial, Limited; London and County; London Joint Stock; London and South Western, Limited; London and Westminster; Metropolitan, Limited; Midland, Limited; National; National Provincial Bank of England; Union Bank of London.

IV.—*English Literature in* 1874.

The *Publishers' Circular* for the 31st December, 1874, presents us with its usual analytical table of books published during the year, and its customary monthly summary. In 1874, as in 1873, we note a marked monthly variation of numbers with a *maximum* in December, and *minimum* in January. Next to December, the months of November and May are the most prolific, and September presents itself as the least productive month next to January.

When we divide the year into periods of three months, we find a maximum of activity in the months of October, November and December, represented by the figures 1,224,—the numbers for April, May and June being 812, and those for the first and third quarters being 668 and 627 respectively, If we consider the last four months of the year as culminating in the activity of Christmas, we have a total of 1,430, while the months of March, April, May, and June, which may be termed the months of the London season, present us with the figures 1,122.

There is a slight decrease in the number of books published, which the circular attributes to the increase in the cost of production—an increase extending to all the elements of price. As dearness means scarcity, a fall of nearly 150 volumes in the first item of the list—theology, sermons and biblical treatises—with a corresponding fall in most of the other items, cannot excite surprise.

In works of mere imagination (novels, tales and other fictions), there is a slight decrease, as also in poetry and the drama, but a more considerable increase in various branches of useful literature; in arts, sciences and illustrated works, in year books and serials, in belles-lettres, essays, and monographs. In medicine, surgery and the allied sciences, there is, however, a considerable decrease. The chief increase then, is in scientific works, and those, as *The Circular* states, mainly popular and elementary.

Law and jurisprudence, political and social economy, trade and commerce, voyages and travels all show a decrease.

The miscellaneous group, including pamphlets, but not sermons, exhibits a material falling off.

On the whole, as will be seen from the summary for the month, there has been a decrease of 388 works.

In new books, the reduction is 112, in new editions 325, making a total of 437. Against these figures, we have to set off an increase of 49 in American importations.

Analytical Table of Books Published in 1874.

Subjects.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total of Books on each Subject for the Year.	
Theology, sermons, biblical, &c.	*22	22	48	29	66	43	26	24	28	36	44	90	478	
	† 8	9	29	14	16	13	16	8	15	10	12	21	171	
	‡—	—	2	4	1	1	—	2	—	3	1	1	15	664
Educational, classical, and philological	*11	33	26	23	40	30	21	23	16	20	23	35	301	
	† 2	6	2	2	10	3	7	5	—	8	6	7	58	
	‡—	—	1	2	1	—	—	—	—	—	2	—	6	365
Juvenile works and tales	* 1	5	11	4	8	11	7	9	20	30	36	65	207	
	† 1	—	—	3	2	—	—	2	2	1	3	8	22	
	‡—	—	—	—	—	—	—	—	—	—	—	—	0	229
Novels, tales, and other fiction	* 9	26	34	32	51	32	36	35	33	45	98	85	516	
	† 4	10	26	27	31	26	20	24	19	29	47	19	282	
	‡ 3	—	1	—	2	2	—	1	—	10	5	3	27	825
Law, jurisprudence, &c.	* 3	2	7	5	9	3	6	8	6	6	8	8	71	
	†—	7	3	—	1	—	3	1	3	2	2	1	23	
	‡ 3	2	2	1	—	3	—	4	—	4	3	3	30	124
Political and social economy, trade and commerce	*—	5	23	10	25	5	7	7	6	5	5	3	101	
	†—	2	3	1	4	—	—	1	4	1	3	—	19	
	‡ 1	—	—	3	4	3	—	1	—	1	—	—	13	133
Arts, science, and illustrated works	*20	23	36	24	35	35	27	24	18	50	46	83	421	
	† 6	7	16	8	11	13	9	7	13	10	14	11	125	
	‡ 2	3	4	10	13	9	—	10	—	13	9	4	77	623
Voyages, travels, and geographical research	* 5	16	15	12	18	15	15	15	7	20	18	22	178	
	†—	4	2	—	4	4	7	15	3	5	5	4	58	
	‡—	—	—	—	—	1	—	2	—	6	3	1	13	244
History, biography, &c.	*11	23	28	20	25	23	21	17	18	21	22	36	265	
	† 3	4	7	6	14	9	3	8	4	3	8	13	82	
	‡ 1	—	1	3	5	6	—	5	—	7	12	6	46	393
Poetry and the drama	* 9	10	21	15	30	14	22	13	11	15	21	42	223	
	† 3	1	1	1	4	—	8	1	4	7	7	15	52	
	‡ 6	2	1	3	4	3	—	1	—	5	—	5	30	305
Year books and serials in volumes	*27	25	19	12	25	6	12	9	6	9	26	67	243	
	†—	2	—	—	—	—	—	—	—	—	—	—	2	
	‡ 1	—	1	1	—	—	—	—	—	1	—	—	4	249
Medicine, surgery, &c.	* 3	5	18	2	12	6	15	6	6	8	6	8	95	
	† 1	2	4	4	2	—	2	—	—	6	2	1	24	
	‡—	3	—	2	1	1	—	—	—	4	2	3	16	135
Belles lettres, essays, monographs, &c.	* 4	19	14	10	20	9	10	12	5	8	11	37	159	
	†—	6	4	4	3	—	2	1	3	—	9	7	39	
	‡ 1	2	—	—	1	3	—	1	—	3	—	2	13	211
Miscellaneous, including pamphlets, not sermons	* 8	11	10	6	6	6	9	5	6	11	5	10	93	
	†—	1	2	—	—	1	—	2	1	1	—	1	9	
	‡—	—	—	—	—	—	—	—	—	—	—	1	1	103
														4,603

* New books. † New editions. ‡ American importations.

Summary for each Month.

	New Books.	New Editions.	American Importations.
January	133	28	18
February	225	61	12
March	310	99	13
April	204	70	29
May	870	102	32
June	238	69	32
July	234	77	—
August	207	75	27
September	186	71	—
October	284	83	57
November	369	118	87
December	591	108	34
	3,351	961	291

Note.—Making the total during the twelve months, full titles, 4,603 given in the *Publishers' Circular.*

V.—*Fires in the Metropolis during the Year* 1874.

Captain Shaw, chief officer of the Metropolitan Fire Brigade, has issued his annual report on the state of the brigade, and on the fires in London during the year 1874. This report is, as usual, very full and complete, and abounds in interesting details; and it is arranged in all its parts so as to admit of ready comparison with previous years.

At p. 4 of the report, we are presented with a table showing the number of fires that have occurred in each of the nine years 1866-74 inclusive, distinguishing the serious from the slight, with the percentages of each class. The figures for the last five years, 1870-74, inclusive, are given in the following table:—

Years.	Number of Fires.			Percentages.		
	Serious.	Slight.	Total.	Serious.	Slight.	Total.
1870	276	1,670	1,946	14	86	100
'71	207	1,635	1,842	11	89	100
'72	120	1,374	1,494	8	92	100
'73	166	1,382	1,548	11	89	100
'74	154	1,419	1,573	10	90	100

From this table, it will be seen that the year 1874 compares very favourably with its predecessors, with the single exception of 1873. On the same page, we also have a tabular list of firemen commended for special merit in saving life. The list consists of eleven men, of whom five rank as third, and the remaining six as fourth-class firemen. As regards the number of lives saved by each of these nine men, William Ludlow stands first, having on the 8th October saved no fewer than seventeen; and James Wayling has the credit of having saved eleven lives. The services of the remainder are represented by numbers varying from nine to one. The next table which refers to fires comprises a list of all the fires that occurred in the past year, classified according to the occupation of the owners of the dwellings or buildings where such fires originated. Amongst tradespeople, the victuallers stand first, with a total of 50 fires, then oil and colourmen with 32, next grocers with 31, and lastly tailors and clothiers with 30; 28 fires occurred in stables; 25 fires broke out in the shops of boot and shoemakers; 23 in bakehouses, and the same number among drapers; 22 in buildings under repair or in course of erection; 21 in cabinet makers; 20 in unoccupied buildings; 18 in coffee houses; 16 among milliners and dressmakers; 15 in refreshment rooms; 14 in beershops, and the same number among builders, chandlers, tobacconists, and corndealers, with 13 in booksellers, binders, and stationers, greengrocers and fruiterers, and printers. The numbers in other occupations are less considerable. We notice also that 28 fires occurred among farming stock. There were 193 fires in lodging houses, and 295 in private houses; 2 theatres were slightly damaged, and 11 fires occurred in hotels and club houses. The following table will show from what causes the fires have arisen, and which of them has been the most prevalent:—

	Cause.	Number of Fires.
1.	Candle	218
2.	Lamps (not gas) and lights	189
3.	Sparks from fires, &c.	179
4.	Gas	131
5.	Flues—defective	129
6.	Overheating of stoves, &c.	65
7.	Children playing with matches, &c.	62
8.	Hot ashes, &c.	46
9.	Lucifers	40
10.	Smoking tobacco	36
11.	Boiling over of oil, &c.	33
12.	Hearths and fireplaces—defective	21
13.	Lime	15
14.	Airing and drying linen	14
15.	Spontaneous ignition	12
16.	Burning of rubbish	9
17.	Fire, as cause	8
18.	Incendiarism	7
19.	Fireworks—letting off	4
20.	Friction	4
21.	Men at work—gasfitters and plumbers	4
22.	Intoxication	4
23.	Fumigation	2
24.	Lightning	2
25.	Boilers	2
26.	Roasting coffee	1
	Total	1,237
	Miscellaneous, doubtful, and unknown	336
	Total from all causes	1,573

We now come to what may be considered the most interesting, and decidedly the most laborious portion of Captain Shaw's report, viz., an hourly, daily, weekly, and monthly summary of fires for the year 1874.

Hours.—Those of 1 a.m. and 9 p.m. seem to have been the most disastrous. Between the hours of 1 and 2 a.m., there occurred 79 conflagrations, but between 9 and 10 p.m. no fewer than 166 took place. The time at which the fewest alarms of fire were given, was from 6 to 7 a.m. Between these two hours, only 18 fires appear to have taken place. *Days.*—It is on Wednesday that the least number of fires (195) took place during the year 1874. Friday, our proverbially unlucky day, only figures for 231; whereas Thursday's fires amount to 240. The following table, which gives the total of the fires of each day of the week, during the five years 1870-74, is compiled from the returns of those five years.

Year.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday	Friday.	Saturday.
1870........	290	252	258	266	300	258	322
'71........	286	202	247	302	271	258	276
'72........	199	206	213	207	220	220	229
'73........	202	209	237	199	230	243	228
'74........	222	228	228	195	240	231	229
Total	1,199	1,097	1,183	1,169	1,261	1,210	1,284

Thus, it will be seen that the days stand in the following order, beginning with that on which the number was the smallest: Monday, Wednesday, Tuesday, Sunday, Friday, Thursday, Saturday—the number on the Saturday exceeding that on the Monday by no less than 1284—1097, or 187, being nearly 15 per cent. of the highest number. *Weekly.*—The largest number of fires in one single week took place in that ending the 22nd July, the number being 59. The number of times that the brigade was called out was 61, but one of these was for a chimney fire, and the other was a false alarm.

During the week ending with the 16th September, the least number of fires took place, only eighteen being recorded. Singularly enough, this is likewise the only week during the year in which all the calls on the services of the brigade were for *bonâ fide* fires, *i.e.*, none of them were for chimneys on fire, or were false alarms. This week makes the eleventh free from such calls during the years 1870-74. In fact, it appears from Captain Shaw's report, that a large percentage of calls in each year are from the two first-mentioned causes, viz., false alarms and chimneys on fire. If we take the total of the number of false alarms during the years 1870-74 (532), and that of the calls for chimneys on fire (423), and compare these two totals (separately) with the sum total of calls on the brigade (9,358) during the same number of years, we find that nearly 6 per cent. of them were for false alarms, and about 5 per cent for chimneys on fire. *Months.*—The most disastrous month during the year was that of July, when there were 200 calls. Of these, 9½ per cent. were for false alarms and chimney fires, leaving 90½ per cent., or 187 calls for either serious or slight fires. Of these again, 161 were for the latter, and 20 for the former class. Looking at the monthly summaries for the years 1870-74, we find that July throughout has been the month most visited by fires. Out of 923 serious fires that occurred during this period, 106 happened in the month of July. This leaves 717 to be divided amongst the remaining months of the year. Hence the highest average per month is 13 against an average of 21 for the month of July.

The loss and saving of lives, always a subject of great interest, is treated in this report in great detail. The number of lives endangered during the year 1874, was 157, of which 134 were saved, and of the remainder 13 were rescued, but, owing to the severity of the injuries received, afterwards died, and the remaining 23 perished in the flames. During the five years 1870-74, 884 lives were endangered, and of these 17 per cent., or 151, either died before or after their rescue. The number of lives saved during the past year amounted to 134, and of these, more than half were males. Those saved during the five years 1870-74 were 733, and of these nearly 55 per cent. were males. Of the lives lost during the year 1874, the greater number were lost at the beginning and end of the week, viz., on Monday and Saturday—each of these days figuring with a total of 5 lives lost. The day on which most lives were saved was Thursday, 8th October, on which one single member of the fire brigade, as already stated, saved 17 persons from perishing in the flames. Of these, 5 were males and 12 females. The time between 11 and 12 in the forenoon seems to have been the most disastrous to life during the year 1874—as during that time 5 lives were lost; whereas from 2 till 3 in the morning, the greatest number of lives were saved, viz., 22. During the week from the 7th to the 14th October, 19 lives were endangered, of these 18 were fortunately saved; the other one was a male who was rescued alive, but who afterwards, owing to the nature of the injuries received, died. The week during which the most lives were endangered and all saved, was that from the 11th-18th of November, when 13 lives were placed in danger and all saved.

We now turn to that part of the report which relates to the brigade itself—to whose exertions we are indebted for the results recorded in the remainder of the report. As has been already stated, 134 lives were saved during the year 1874, of which 73 were rescued by members of the brigade.

There are forty-nine brigade stations. The number of journeys made by the engines was 6,872, and the total distance run 21,181 miles. The quantity of water used by the brigade for extinguishing fires during the year amounted, in round numbers, to no less than 16½ million gallons. Yet the chief difficulty, as it would seem, that the brigade has to contend with, is unsatisfactory water arrangements, in the shape of short supply of water, late attendance of turncocks, and the non-attendance of these officials. From one or other of these causes, the water arrangements during the year 1874, were forty-seven times found to be in an unsatisfactory state. The year 1871 is the first in which Captain Shaw notices these deficiencies in the arrangements for the supply of water, it being the year before that in which the Metropolis Water Act came into force, and it is interesting to notice how the number of unsatisfactory arrangements steadily decreased year by year. In 1871, they were 67, in 1872, 58; in 1873, 52, and, as just stated, in 1874, they had decreased to 47. The strength of the brigade is 395 men, including the chief officer, the superintendents and all ranks. Of these, 108 are employed on the various watches during the day, and 181 by night. It would appear that there are on an average between 40 and 50 either sick, injured, on leave, or under instruction, so that if we take the latter number and add it to those on duty during the twenty-four hours (289), we find, by subtracting this total from the strength of the brigade (395—339), that 56 men are left as available for general work at fires. Of course, men engaged in such work as those of the London Fire Brigade, cannot be expected to be free from casualties, and the list of wounds and injuries sustained by them during the year 1874, is large. "But"—to quote Captain Shaw's words—"so long as the men work well, no diminution of accidents can be expected." The number of cases of ordinary illness (263) is larger for the year 1874 than in any of the five 1870-74, with the exception of the year 1871, when there were 323 cases. The smallest amount of injuries received by members of the brigade was during the year 1874, when there were 93 against 104 in 1870, 95 in 1871, 100 in 1872, and 98 in 1873. Of the 93 injuries sustained in 1874, many were very serious, but fortunately only one terminated fatally. This has been the case in each of the five years 1870-74, except in 1872, when 3 men of the fire brigade lost their lives. From a table headed "Nature of Accidents," we extract the following particulars: 4 men suffered from burns and scalds, 1 was threatened with suffocation, 13 were bruised or sprained, in 5 the eyes were injured, there were 9 incised, lacerated and punctured wounds, 10 bodily injuries, 21 injuries to the hands and arms, 26 to the feet and legs, while the small number of 4 injuries to the head and face gives evidence of the efficient protection afforded by the helmet.

We are happy to see that "the condition of the brigade with regard to discipline and general efficiency, is in all respects perfectly satisfactory."

VI.—*The Trade and Manufactures of India.*

THE trade of India is represented only in a small degree by the returns from the great seaports, for the bulk of Indian products is consumed in India itself, and the value of the external commerce is only a fraction of that of the internal and interportal trades combined. The report upon the moral and material progress of India states that there are no reliable statistics of the internal trade, but that that from port to port is steadily increasing; and although external trade is said to have shown continued depression during the year 1872-73, yet there is an increase as regards several of the most important staples. The whole sea-borne trade of India, exclusive of treasure, during 1872-73 is reported to be worth 107,485,697*l.*, of which the foreign trade represents 86,488,056*l.* and the interportal 20,997,641*l.* The shipping which carried the foreign trade consisted of 6,095 vessels entered, with an aggregate of 2,371,529 tons; and 637 cleared, representing 2,388,451 tons. The interportal trade was borne by 15,071 vessels. The average tonnage of vessels in the Indian trade continues to increase. The value of the Bombay interportal trade, including imports and exports, exceeds that of any other port in India. It was worth (exclusive of treasure) 6,475,369*l.* for 1872-73; that of Bengal, 5,772,185*l.*; of Madras, 3,884,984*l.*; of Burmah, 2,234,540*l.*; and of Sindh, 2,640,561*l.* But in the foreign trade Bengal takes the lead, its whole trade, exclusive of treasure, being worth above 40 millions, or half the value of the total imports of India, and two-fifths the value of the total exports. The whole foreign trade of Bombay is worth over 30,000,000*l.*; of Madras, over 9,000,000*l.*; of Burmah, 5,500,000*l.*; and of Sindh, nearly a million.

The great article of export from India, next to cotton, is rice. For the foreign trade alone the quantity exported during the year 1872-73 was 22,973,797 cwts., worth 5,701,439*l.* The largest quantity, 12,675,000 cwts., goes to Europe. The next largest customers are Ceylon and Mauritius, whilst the Straits and the Persian Gulf carry off a considerable share. This trade is flourishing and improving everywhere. Cotton vies with rice as an article of export. In 1872-73, a remarkably bad year, the exports amounted to 494,214,447 lbs., worth 14,022,108*l.*, being less by 315,031,640 lbs. than the exports of the previous year. A great quantity of cotton is worked up in India, and the duty on imported piece-goods fosters and encourages the home manufacture. The most important industry in the Bombay Presidency is now the manufacture of cotton cloth, and yarn. This manufacture has always existed in nearly every village. The cotton is cleaned and spun into thread by all classes of the people, and there are weavers and dyers in every town. Printed goods have also long been manufactured, especially in the large towns of Guzerat, stronger and more durable than European goods. But it is only within the last ten years that steam spinning and weaving mills have been introduced. The present very prosperous state of the native cotton manufacturing industry is due to various causes, but not the least important among them are the inferior character of the Manchester goods and the excellence and durability of the cloths manufactured in India. The local cotton mills have almost annihilated the English trade in low class cotton goods, grey shirtings, and T-cloths and yarns. The productions of the mills find a ready sale at paying prices, and India gains by saving the expense of sending its raw material to Europe and having it returned in a manufactured form.

The most valuable and general article of export from Calcutta, next to cotton, opium and rice, is jute. The quantity exported in 1828 was 364 cwt., worth 62*l.*, and the extraordinary increase that has since taken place, is due solely to the energy of the cultivators of Bengal. They found it profitable, engaged in it with alacrity, and created the trade. From 1858 to 1863, the average exportation of jute from Calcutta, was 967,724 cwts. From 1863 to 1868, it had risen to 2,628,110 cwts. The quantity of raw jute exported in 1872-73 was 7,080,912 cwts., worth 4,142,514*l.*, an increase of nearly a million cwts. as compared with the previous year. Thus, has been created and extended an industry in forty-five years to a value of more than 4½ millions, without any official encouragement or aid whatever, It is remarkable how various industries, carried on at a vast distance, act upon each other. The growth of jute in Bengal led to its manufacture in Dundee, and this caused the revival of the whale fishery in Baffin's Bay. In 1872, the quantity of jute imported into Dundee was 1,828,614 cwts., and the bulk of the whale oil is required by the jute manufacturers of Dundee, and its neighbourhood. Thus, the port of Dundee has now become the centre of the whale fishing trade, and cargoes of oil from the Arctic Regions may be seen discharging alongside cargoes of jute from Calcutta, both being essential to the prosperity of this industry.

There has been a great increase in the production of tea and sugar; the latter article has nearly doubled. India rubber, from the *Ficus elastica* of Assam, is also a product belonging to the region whose commercial centre is Calcutta. The special product of the Madras Presidency, besides cotton, is coffee, the great mass of which is brought down the ghats from the hill districts of Mysore, Cŭrg, Wynaad, and the Nilgiris, to be shipped from the Malabar ports. There is an increasing trade from India in hides and skins. In 1872-73, the export rose to 2,298,000, worth 2,921,416*l.*, an increase of nearly three million hides compared with the previous year. Wool is chiefly exported from Bombay and Kurachi. Saltpetre is fast recovering its former rank as an important article of export. In teak timber, there was a great improvement. In British Burmah, besides rice and timber, the great export is *cutch*, manufactured in large quantities for export to

Europe, from the *acacia catechu*, chiefly in the Prome district. Cinchona bark, yielding quinine and other febrifuge alkaloids, will soon become an important article of export, as it is one of the most valuable products of India for home use.

The chief existing interest in the sea-borne traffic, is in the development of the transport of merchandise by the Suez canal. At present, out of a total value of the trade of India with Europe and America, about 40 millions, or 60 per cent., passes annually through the Suez Canal. The report furthermore states, that there is still a want of a really exhaustive and systematic knowledge of the various products of India. There are abundant materials for a general superficial acquaintance with the subject, but more precise and comprehensive information is required, in order to render such knowledge really useful and practical. There are 2,000 articles named in trade returns, and 7,000 more are mentioned in various works, whilst the list is doubtless very incomplete, and there is some confusion about almost every article. A complete collection and identification of raw produce and of manufactured goods are required; trade museums might be formed; and an industrial survey organised. These measures were strongly advocated many years since by Dr. Mouat, in his report on the exhibition of prison manufactures held in Calcutta in 1856. Limited markets are a bar to improvements, and production on a small scale is wasteful and costly. The proposed survey, among other useful results, might produce an extension of the demand for products of all kinds, by affording to every part of India easily accessible means of information with regard to the productions of the whole country.

VII.—*Lloyd's Statistics of Marine Losses in* 1873.

THROUGH the courtesy of the Committee and Secretary at Lloyd's, we are again in a position to publish the annexed statistics of casualities at sea and the results thereof as reported in *Lloyd's List* during the year 1873.

It will be seen that the tables which follow are counterparts of those relating to the year 1872, which were published at p. 519 of the *Journal of the Statistical Society* (vol. xxxvii, part iv, being the December number for 1874).

A comparison of the two returns for 1872 and 1873 yields some interesting results both for quarters and for years. These results are briefly noticed under the following heads—

Lives Lost.—The lives lost in sailing vessels and steamers collectively in the quarters of the two years, and in the years themselves, were as follows :—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Year.
1872	280	870	232	648	1530
'73	467	699	164	645	1975

So that we suffered in the year 1873, a loss of 445 more lives than in 1872, which losses, however, were very differently distributed throughout the four quarters of the year. The fourth quarter proved nearly equally fatal to life in the two years, and the third quarter in both years showed the most favourable figures; but the maximum loss fell on the fourth quarter in 1872, in the second quarter in 1873.

We are, therefore, obviously dealing with an order of facts liable to great fluctuation.

Crews Saved and Lost.—The figures for sailing vessels and steamers taken together are embodied in the annexed table.

	Crews.			
	Saved.		Drowned.	
	1872.	1873.	1872.	1873.
1st Quarter	301	404	27	78
2nd „	229	153	25	67
3rd „	177	190	18	31
4th „	591	330	53	47
Years	1,298	1,077	123	223

These figures also show the irregular distribution of the casualties in the different quarters of one year as compared to another; and they also show for the whole year a higher proportion of crews lost in 1873, than in the year previous.

For many other interesting comparisons bearing on the important question now before the public, the reader must be referred to the tables themselves as given in extenso.

I.—*A Table showing the Number of Wrecks and Casualties to Sailing Vessels and Steamers*
Compared with the Average Number and

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1873.		Average Seven previous Years.		1873.		Average Seven previous Years.		1873.		Average Seven previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1. *Missing*	112	2·02	55	1·12	37	0·66	29	0·50	149	1·34	85	0·79
2. *Abandoned*—												
Recovered	23	0·41	35	0·70	11	0·19	43	0·74	34	0·31	78	0·72
Lost................	135	2·44	127	2·56	95	1·70	139	2·39	230	2·07	265	2·47
Total	158	2·85	162	3·26	106	1·89	182	3·13	264	2·38	343	3·19
3. *Collision*—												
Not damaged	299	5·40	202	4·09	288	5·15	261	4·49	587	5·27	464	4·31
Damaged........	661	11·94	535	10·81	652	11·66	617	10·62	1,313	11·79	1,152	10·71
Sunk	107	1·93	72	1·45	91	1·62	79	1·37	198	1·78	151	1·40
Total	1,067	19·27	809	16·35	1,031	18·43	957	16·48	2,098	18·85	1,767	16·42
4. Sinking from causes other than collision	153	2·76	171	3·45	182	3·25	191	3·28	335	3·01	362	3·36
5. *Stranded*—												
Got off	728	13·15	691	13·97	789	14·11	735	12·67	1,517	13·63	1,427	13·27
Not got off	495	8·94	516	10·43	622	11·12	702	12·08	1,117	10·04	1,218	11·32
Subsequent fate not reported	94	1·70	153	3·08	172	3·07	193	3·32	266	2·39	345	3·21
Total	1,317	23·79	1,360	27·48	1,583	28·30	1,630	28·07	2,900	26·06	2,989	27·80
6. Capture	1	0·02	6	0·12	4	0·07	13	0·23	5	0·05	19	0·18
7. Piracy................	—	—	2	0·05	3	0·05	3	0·05	3	0·03	5	0·05
8. Burnt or on fire	81	1·46	67	1·36	72	1·29	81	1·40	153	1·38	148	1·38
9. Dismasted or disabled........	164	2·96	189	3·82	276	4·93	294	5·06	440	3·95	483	4·49
10. Jettison of cargo under deck	99	1·79	92	1·86	64	1·15	93	1·60	163	1·46	185	1·72
11. Jettison of deck-load or washing overboard	53	0·96	59	1·18	96	1·72	101	1·74	149	1·34	160	1·49
12. Leaky................	658	11·89	518	10·47	672	12·02	651	11·22	1,330	11·95	1,169	10·87
13. Loss of anchor and chains...	216	3·90	254	5·13	183	3·28	277	4·77	399	3·58	531	4·94
14. Machinery damaged, &c.	—	—	—	—	—	—	—	—	—	—	—	—
15. Mutiny, sickness, or casualties to crew	148	2·67	128	2·59	118	2·11	120	2·06	266	2·39	248	2·30
16. Shipdmged.,&c.	1,291	23·32	1,067	21·56	1,143	20·44	1,167	20·11	2,434	21·87	2,234	20·77
17. Water-logged....	18	0·33	10	0·20	23	0·41	17	0·29	41	0·36	27	0·25
Number of casualts.	5,536	—	4,949	—	5,593	—	5,806	—	11,129	—	10,755	—
Number of vessels	5,177	—	4,575	—	5,327	—	5,408	—	10,504	—	9,983	—

reported in "Lloyd's List" during the Year 1873, *and the respective Percentages thereon, Percentages for the Seven Previous Years.*

First Half-Year.				Second Half-Year.				Annual Total.				Steamers.
1873.		Average Seven previous Years.		1873.		Average Seven previous Years.		1873.		Average Seven previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
14	1·14	4	0·64	1	0·08	2	0·30	15	0·61	7	0·45	1. *Missing*
												2. *Abandoned*—
1	0·08	1	0·11	—	—	1	0·07	1	0·04	2	0·10	Recovered
2	0·16	2	0·31	1	0·08	2	0·27	3	0·12	4	0·27	Lost
3	0·24	3	0·42	1	0·08	3	0·34	4	0·16	6	0·37	Total
												3. *Collision*—
208	16·94	101	15·66	210	17·21	146	18·19	418	17·08	247	17·06	Not damaged
153	12·46	82	0·64	158	12·95	109	13·63	313	12·70	191	13·19	Damaged
6	0·49	9	1·52	10	0·82	15	1·87	16	0·65	25	1·72	Sunk
367	29·89	192	29·82	378	30·98	270	33·69	745	30·43	463	31·97	Total
42	3·42	16	2·46	38	3·11	21	2·67	80	3·27	37	2·57	4. Sinking from causes other than collision
												5. *Stranded*—
223	18·16	127	19·70	269	22·05	158	19·70	492	20·10	285	19·70	Got off
38	3·09	28	4·29	48	3·93	39	4·97	86	3·51	68	4·67	Not got off
15	1·22	14	2·13	7	0·58	9	1·19	22	0·90	23	1·61	Subsequent fate not reported
276	22·47	169	26·12	324	26·56	208	25·86	600	24·51	376	25·98	Total
—	—	1	0·11	5	0·41	1	0·07	5	0·20	1	0·09	6. Capture
—	—	—	—	—	—	—	—	—	—	—	—	7. Piracy
35	2·85	18	2·83	21	1·72	22	2·71	56	2·29	40	2·76	8. Burnt or on fire
13	1·06	6	0·86	12	0·98	10	1·26	25	1·02	16	1·09	9. Dismasted or disabled
15	1·22	9	1·44	16	1·31	9	1·05	31	1·27	18	1·22	10. Jettison of cargo under deck
2	0·16	7	1·09	10	0·82	9	1·10	12	0·49	16	1·10	11. Jettison of deckload or washing overboard
27	2·20	19	3·03	33	2·70	18	2·21	60	2·45	37	2·57	12. Leaky
15	1·22	9	1·33	10	0·82	7	0·85	25	1·02	15	1·07	13. Loss of anchors and chains
269	21·91	128	19·81	243	19·92	150	18·72	512	20·92	278	19·21	14. Machinery damaged or short of coals
13	1·06	9	1·40	23	1·89	8	1·03	36	1·47	17	1·19	15. Mutiny, sickness, or crew refusing duty
137	11·16	56	8·61	105	8·61	65	8·12	242	9·89	121	8·34	16. Ship dmgd., &c.
—	—	—	—	—	—	—	0.02	—	—	—	0·01	17. Water-logged
1,228	—	645	—	1,220	—	803	—	2,448	—	1,448	—	Number of casualties
1,182	—	620	—	1,194	—	776	—	2,376	—	1,396	—	Number of steamers

II.—*A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with Salvage during the Year* 1873, *and the respective Percentages thereon, compared*

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1873.		Seven Years' Average.		1873.		Seven Years' Average.		1873.		Seven Years' Average.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—												
Total loss	977	18·87	905	19·78	1,029	19·32	1,123	20·78	2,006	19·09	2,029	20·32
Constructive loss	95	1·84	95	2·08	51	0·96	93	1·73	146	1·39	189	1·89
Great damage	438	8·46	488	10·67	665	12·48	655	12·11	1103	10·50	1,143	11·45
Minor damage	2,720	52·52	2,080	45·46	2,512	47·16	2,345	43·36	5,232	49·81	4,425	44·32
Raised after sinking	18	0·35	18	0·40	18	0·34	13	0·23	36	0·34	31	0·31
Not damaged or results unknown	929	17·95	989	21·60	1,052	19·74	1,179	21·79	1,981	18·87	2,167	21·71
Total	5,177	—	4,575	—	5,327	—	5,408	—	10,504	—	9,983	—
Results to Cargo so far as reported—												
All lost	536	10·35	529	11·57	597	10·27	560	10·36	1,133	10·78	1,090	10·92
Part lost	246	4·75	258	5·65	208	3·90	294	5·43	454	4·31	551	5·52
All saved	13	0·25	21	0·46	17	3·19	16	0·29	30	0·28	37	0·37
Forwarded	2	0·04	18	0·39	1	0·02	9	0·17	3	0·03	27	0·27
Heated	8	0·15	10	0·22	4	0·08	9	0·18	12	0·11	19	0·20
Shifted	71	1·37	97	2·12	48	0·90	72	1·33	119	1·13	169	1·41
Otherwise damaged	57	1·10	73	1·59	66	1·24	66	1·21	123	1·17	138	1·39
Salvage Services	359	6·93	496	10·85	411	7·71	518	9·57	770	7·73	1,014	10·16
Lives—												
Crews saved	522	10·08	414	9·05	484	9·09	507	9·37	1,006	9·58	916	9·22
Crews drowned	130	2·51	26	0·58	77	1·44	32	0·59	207	1·97	58	0·59
Lives lost so far as reported (in both ships and steamers)	1,166	—	833	—	809	—	839	—	1,975	—	1,672	—

ervices, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's List," ith the Average Number and Percentages for the Seven Previous Years.

First Half-Year.				Second Half-Year.				Annual Total.				
1873.		Seven Years' Average.		1873.		Seven Years' Average.		1873.		Seven Years' Average.		Steamers.
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
												Results to Ship—
87	7·36	57	9·20	99	8·29	77	9·91	186	7·83	134	9·59	Total loss
9	0·76	5	0·76	3	0·25	4	0·50	12	0·51	9	0·62	Constructive loss
83	7·02	48	7·72	82	6·87	69	8·91	165	6·94	117	8·38	Great damage
585	49·49	241	38·85	529	44·31	285	36·67	1,114	46·89	525	37·64	Minor damage
9	0·76	5	0·81	9	0·75	7	0·88	18	0·75	12	0·85	Raised after sinking
409	34·60	264	42·66	472	39·53	335	43·13	881	37·08	599	42·92	Not damaged or results unknown
1,182	—	620	—	1,194	—	777	—	2,376	—	1,396	—	Total
												Results to Cargo so far as reported—
37	3·13	23	3·74	41	3·43	27	3·46	78	3·28	50	3·61	All lost
30	2·54	28	4·54	37	3·10	32	4·12	67	2·82	60	4·31	Part lost
5	0·42	1	0·14	1	0·08	1	0·13	6	0·25	2	0·13	All saved
—	—	1	0·23	—	—	1	0·13	—	—	2	0·17	Forwarded
1	0·08	—	0·09	1	0·08	1	0·09	2	0·08	1	0·09	Heated
13	1·10	6	0·94	22	1·84	9	1·22	35	1·47	15	1·10	Shifted
11	0·93	15	2·37	18	1·51	17	2·21	29	1·22	32	2·28	Otherwise damaged
72	6·09	54	8·74	92	7·71	56	7·27	164	6·90	110	8·21	*Salvage Services*
												Lives—
35	2·96	25	4·08	36	3·02	23	2·98	71	2·99	50	3·60	Crews saved
15	1·27	1	0·21	1	0·08	1	0·15	16	0·67	2	0·17	Crews drowned
See	Sailing		Vessels.		—	—	—	—	—	—	—	Lives lost so far as reported (in both ships and steamers)

III.—*A Table showing the Number of Wrecks and Casualties to Sailing Vessels reported Compared with the Average Number and Percentages*

Sailing Vessels.	First Quarter.				Second Quarter.			
	1873.		Average Seven previous Years.		1873.		Average Seven previous Years.	
	Number.	Per centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. *Missing*	48	1·31	26	0·80	64	3·42	29	1·71
2. *Abandoned*—								
Recovered	19	0·52	23	0·71	4	0·22	12	0·69
Lost	106	2·89	75	2·32	29	1·55	52	2·99
Total	125	3·41	98	3·03	33	1·77	64	3·68
3. *Collision*—								
Not damaged	183	4·99	121	3·76	116	6·20	82	4·72
Damaged	419	11·43	352	10·91	242	12·95	184	10·63
Sunk	56	1·52	43	1·33	51	2·73	29	1·67
Total	658	17·94	516	16·00	409	21·88	294	17·02
4. Sinking from causes other than collision	70	1·91	96	2·99	83	4·44	74	4·31
5. *Stranded*—								
Got off	412	11·24	417	12·94	316	16·91	274	15·90
Not got off	359	9·79	333	10·33	136	7·28	183	10·62
Subsequent fate not reported	47	1·28	106	3·29	47	2·51	46	2·68
Total	818	22·31	856	26·56	499	26·70	504	29·20
6. Capture	—	—	3	0·09	1	0·05	3	0·17
7. Piracy	—	—	1	0·04	—	—	1	0·06
8. Burnt or on fire	37	1·01	36	1·11	44	2·35	31	1·82
9. Dismasted or disabled	138	3·76	113	3·52	26	1·39	76	4·38
10. Jettison of cargo under deck	90	2·45	60	1·88	9	0·48	32	1·84
11. Jettison of cargo or washing overboard	46	1·25	36	1·10	7	0·38	23	1·33
12. Leaky	427	11·64	335	10·39	231	12·36	183	10·62
13. Loss of anchors or chains	177	4·84	214	6·64	39	2·09	40	2·32
14. Mutiny, sickness, casualty to crew or refusing duty	80	2·18	78	2·43	68	3·64	50	2·87
15. Ship damaged, loss of sails, bulwarks, &c.	947	25·82	749	23·24	344	18·41	318	18·42
16. Water-logged	6	0·16	6	0·17	12	0·64	5	0·25
Number of casualties	3,667	—	3,223	—	1,869	—	1,727	—
Number of vessels	3,386	—	2,949	—	1,791	—	1,626	—

in "Lloyd's List," during the Four Quarters of 1873, *and the respective Percentages thereon for the same period of the Seven Previous Years.*

Third Quarter.				Fourth Quarter.				Sailing Vessels.
1873.		Average Seven previous Years.		1873.		Average Seven previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
23	1·00	14	0·73	14	0·42	15	0·39	1. *Missing*
								2. *Abandoned*—
5	0·21	14	0·75	6	0·18	29	0·73	Recovered
36	1·56	39	2·04	59	1·80	99	2·55	Lost
41	1·77	53	2·79	65	1·98	128	3·28	Total
								3. *Collision*—
133	5·76	92	4·86	155	4·72	169	4·32	Not damaged
294	12·72	218	11·48	358	10·91	399	10·20	Damaged
44	1·91	29	1·54	47	1·43	50	1·29	Sunk
471	20·39	339	17·88	560	17·06	618	15·81	Total
62	2·68	77	4·06	120	3·66	114	2·91	4. Sinking from causes other than collision
								5. *Stranded*—
303	13·11	263	13·90	486	14·81	472	12·07	Got off
234	10·12	210	11·09	388	11·82	491	12·57	Not got off
109	4·72	49	2·60	63	1·92	143	3·66	Subsequent fate not reported
646	27·95	523	27·59	937	28·55	1,106	28·30	Total
1	0·04	5	0·28	8	0·09	8	0·20	6. Capture
1	0·04	2	0·11	2	0·06	1	0·02	7. Piracy
23	1·00	38	2·03	49	1·49	43	1·10	8. Burnt or on fire
138	5·97	100	5·30	138	4·20	194	4·95	9. Dismasted or disabled
30	1·30	30	1·58	34	1·04	63	1·61	10. Jettison of cargo under deck
18	0·78	20	1·08	78	2·38	81	2·06	11. Jettison of cargo or washing overboard
321	13·89	247	13·05	351	10·70	404	10·33	12. Leaky
31	1·34	52	2·76	152	4·63	225	5·75	13. Loss of anchors or chains
58	2·51	49	2·59	60	1·83	71	1·81	14. Mutiny, sickness, casualty to crew or refusing duty
441	19·08	338	17·85	702	21·39	829	21·20	15. Ship damaged, loss of sails, bulwarks, &c.
6	0·26	6	0·32	17	0·52	11	0·28	16. Water-logged
2,311	—	1,895	—	3,282	—	3,911	—	Number of casualties
2,224	—	1,789	—	3,103	—	3,619	—	Number of vessels

IV.—*A Table showing the Number of Wrecks and Casualties to Steamers reported in*
Compared with the Average Number and Percentages

Steamers.	First Quarter.				Second Quarter.			
	1873.		Average Seven previous Years.		1873.		Average Seven previous Years.	
	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. *Missing*	13	1·77	3	0·73	1	0·20	1	0·53
2. *Abandoned*—								
Recovered	1	0·14	—	—	—	—	—	—
Lost	1	0·14	2	0·46	1	0·20	—	—
Total	2	0·28	2	0·53	1	0·20	1	0·27
3. *Collision*—								
Not damaged	106	14·48	56	15·09	102	20·56	45	16·42
Damaged	94	12·84	46	12·34	59	11·90	35	13·05
Sunk	4	0·55	6	1·53	2	0·40	4	1·53
Total	204	27·87	108	28·96	163	32·86	84	31·00
4. Sinking from causes other than collision	22	3·01	9	2·52	20	4·03	6	2·37
5. *Stranded*—								
Got off	124	16·94	64	17·19	99	19·96	63	23·16
Not got off	23	3·14	16	4·16	15	3·02	12	4·48
Subsequent fate not reported	5	0·68	10	2·60	10	2·02	4	1·47
Total	152	20·76	90	23·95	124	25·00	79	29·11
6. Capture	—	—	—	—	—	—	1	0·20
7. Piracy	—	—	—	—	—	—	—	—
8. Burnt or on fire	20	2·73	8	2·10	15	3·02	11	3·84
9. Dismasted or disabled	9	1·22	4	1·03	4	0·81	2	0·63
10. Jettison of cargo under deck	8	1·09	5	1·34	7	1·41	4	1·58
11. Jettison of cargo or washing overboard	2	0·27	6	1·53	—	—	1	0·47
12. Leaky	16	2·19	10	2·75	11	2·22	9	3·42
13. Loss of anchors or chains	8	1·09	8	1·99	7	1·41	1	0·42
14. Machinery damaged or short of coals	158	21·59	75	20·18	111	22·38	52	19·32
15. Mutiny, sickness, casualty to crew, or refusing duty	10	1·37	4	1·18	3	0·60	5	1·68
16. Ship damaged, loss of sails, bulwarks, &c.	108	14·75	42	11·16	29	5·85	14	5·11
17. Water-logged	—	—	—	—	—	—	—	—
Number of casualties	732	—	374	—	496	—	271	—
Number of steamers	707	—	359	—	475	—	261	—

"Lloyd's List" during the Four Quarters of 1873, *and the respective Percentages thereon, for the same period of the Seven Previous Years.*

Third Quarter.				Fourth Quarter.				Steamers.
1873.		Average Seven Previous Years.		1873.		Average Seven Previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
—	—	—	—	1	0·14	2	0·39	1. *Missing*
								2. *Abandoned*—
—	—	—	—	—	—	1	0·12	Recovered
1	0·19	—	—	—	—	1	0·28	Lost
1	0·19	1	0·23	—	—	2	0·40	Total
								3. *Collision*—
99	19·00	59	19·15	111	15·88	87	17·59	Not damaged
71	0·38	46	14·83	87	12·45	64	12·88	Damaged
2	13·63	7	2·27	8	1·14	8	1·62	Sunk
172	33·01	112	36·25	206	29·47	159	32·09	Total
17	3·26	7	2·36	21	3·00	14	2·83	4. Sinking from causes other than collisio
								5. *Stranded*—
110	21·11	63	20·40	159	22·74	95	19·27	Got off
26	4·99	15	4·73	22	3·15	25	5·11	Not got off
4	0·77	2	0·83	3	0·43	7	1·41	Subsequent fate not reported
140	26·87	80	25·96	184	26·32	127	25·79	Total
—	—	—	—	5	0·72	—	—	6. Capture
—	—	—	—	—	—	—	—	7. Piracy
7	1·34	11	3·48	14	2·00	11	2·22	8. Burnt or on fire
5	0·96	3	0·83	7	1·00	8	1·53	9. Dismasted or disabled
12	2·30	4	1·30	4	0·57	4	0·90	10. Jettison of cargo under deck
3	0·58	1	0·42	7	1·00	8	1·53	11. Jettison of cargo or washing overboard
13	2·50	6	1·95	20	2·86	12	2·37	12. Leaky
2	0·38	1	0·37	8	1·15	6	1·16	13. Loss of anchors or chains
110	21·11	65	21·19	133	19·03	85	17·19	14. Machinery damaged or short of coals
10	1·92	5	1·48	13	1·86	4	0·75	15. Mutiny, sickness, casualty to crew, or refusing duty
29	5·57	12	3·94	76	10·87	53	10·72	16. Ship damaged, loss of sails, bulwarks, &c.
—	—	—	—	—	—	—	—	17. Water-logged
521	—	308	—	699	—	495	—	Number of casualties
501	—	298	—	693	—	478	—	Number of steamers

V.—*A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with List" during the Four Quarters of* 1873, *and the respective Percentages thereon, Compared*

	Sailing Vessels.							
	First Quarter.				Second Quarter.			
	1873.		Seven Years' Average.		1873.		Seven Years' Average.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—								
Total loss	631	18·64	552	18·70	346	19·32	354	21·74
Constructive loss	52	1·53	57	1·93	43	2·40	38	2·35
Great damage	312	9·21	325	11·02	126	7·04	163	10·05
Minor damage	1,821	53·78	1,410	47·81	899	50·19	670	41·20
Raised after sinking	4	0·12	10	0·36	14	0·78	8	0·47
Not damaged or results unknown	566	16·72	595	20·18	363	20·27	393	24·18
Total	3,386	—	2,949	—	1,791	—	1,626	—
Results to Cargo so far as reported—								
All lost	377	11·13	340	11·54	159	8·88	189	11·73
Part lost	200	5·91	161	5·45	46	2·57	96	5·94
All saved	7	0·21	14	0·49	6	0·34	6	0·40
Forwarded	2	0·06	11	0·36	—	—	7	0·44
Heated	8	0·24	7	0·23	—	—	3	0·19
Shifted	63	1·86	49	1·66	8	0·45	19	1·21
Otherwise damaged	32	0·94	47	1·09	25	1·40	26	1·62
Salvage services	253	7·47	342	11·58	106	5·92	155	9·52
Lives—								
Crews saved	378	11·16	262	8·87	144	8·04	152	9·35
Crews drowned	64	1·89	17	0·59	66	3·69	9	0·56
Lives lost so far as reported in both ships and steamers	467	—	871	—	699	—	311	—

Salvage Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's with the Average Number and Percentages for the same period of the Seven Previous Years.

Sailing Vessels.								
Third Quarter.				Fourth Quarter.				
1873.		Seven Years' Average.		1873.		Seven Years' Average.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
								Results to Ship—
403	18·12	365	20·39	626	20·17	759	20·96	Total loss
24	1·08	43	2·43	27	0·87	50	1·38	Constructive loss
334	15·02	212	11·88	331	10·67	442	12·22	Great damage
965	43·39	749	41·87	1,547	49·86	1,596	44·10	Minor damage
12	0·54	7	0·36	6	0·19	6	0·17	Raised after sinking
486	21·85	413	23·07	566	18·24	766	21·16	Not damaged or results unknown
2,224	—	1,789	—	3,103	—	3,619	—	Total
								Results to Cargo so far as reported—
212	9·53	182	10·17	385	12·38	379	10·46	All lost
61	2·74	92	5·17	147	4·74	201	5·57	Part lost
9	0·40	6	0·33	8	0·25	10	0·28	All saved
1	0·04	5	0·27	—	—	4	0·12	Forwarded
2	0·09	4	0·24	2	0·06	6	0·15	Heated
12	0·54	16	0·92	36	1·16	56	1·54	Shifted
31	1·39	29	1·59	25	1·12	36	0·99	Otherwise damaged
158	7·10	167	9·31	253	8·15	351	9·70	Salvage services
								Lives—
172	7·73	163	9·11	312	10·05	344	9·51	Crews saved
31	1·39	7	0·38	46	1·48	25	0·70	Crews drowned
164	—	257	—	645	—	592	—	Lives lost so far as reported in both ships and steamers

V.—*A Table showing the Results of Wrecks and Casualties to Ship and Cargo,*

	Steamers.							
	First Quarter.				Second Quarter.			
	1873.		Seven Years' Average.		1873.		Seven Years' Average.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Results to Ship—								
Total loss	56	7·92	34	9·55	31	6·53	23	8·71
Constructive loss	4	0·57	3	0·84	5	1·05	2	0·65
Great damage	37	5·23	27	7·56	46	9·69	21	7·95
Minor damage	375	53·04	143	39·77	210	44·21	98	37·59
Raised after sinking	4	0·57	2	0·72	5	1·05	2	0·93
Not damaged or results unknown	231	32·67	149	41·56	178	37·47	115	44·17
Total	707	—	359	—	475	—	261	—
Results to Cargo so far as reported—								
All lost	22	3·11	15	4·10	15	3·16	8	3·23
Part lost	19	2·69	15	4·10	11	2·31	13	5·15
All saved	1	0·14	1	0·24	4	0·84	—	—
Forwarded	—	—	1	0·28	—	—	—	—
Heated	1	0·14	—	—	—	—	—	—
Shifted	13	1·84	5	1·31	—	—	1	0·44
Otherwise damaged	7	0·99	9	2·64	4	0·84	5	2·03
Salvage service	52	7·35	28	7·80	20	4·21	26	10·03
Lives—								
Crews saved	26	3·68	14	3·98	9	1·89	11	4·22
Crews drowned	14	1·98	1	0·32	1	0·21	—	—
Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)	—	—	—	—	—	—	—	—

with Salvage Services, Crews Saved or Drowned and Lives Lost—Contd.

Steamers.								
Third Quarter.				Fourth Quarter.				
1873.		Seven Years' Average.		1873.		Seven Years' Average.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
								Results to Ship—
44	8·78	28	9·44	55	7·94	49	10·22	Total loss
1	0·20	2	0·62	2	0·29	2	0·41	Constructive loss
40	7·98	29	9·58	42	6·06	41	8·49	Great damage
206	41·12	108	36·37	323	46·61	176	36·86	Minor damage
3	0·60	3	0·91	6	0·86	4	0·86	Raised after sinking
207	41·32	128	43·08	265	38·24	206	43·16	Not damaged or results unknown
501	—	298	—	693	—	478	—	Total
								Results to Cargo so far as reported—
17	3·39	10	3·35	24	3·46	15	3·11	All lost
18	3·59	11	3·83	19	2·74	21	4·30	Part lost
1	0·20	—	—	—	—	1	0·15	All saved
—	—	—	—	—	—	—	—	Forwarded
—	—	—	—	1	0·14	—	—	Heated
6	1·18	1	0·48	16	2·31	8	1·67	Shifted
6	1·18	7	2·20	12	1·73	11	2·21	Otherwise damaged
35	6·99	23	7·62	57	8·23	37	7·65	Salvage service
								Lives—
18	3·59	10	3·31	18	2·60	15	3·17	Crews saved
—	—	—	—	1	0·14	1	0·24	Crews drowned
—	—	—	—	—	—	—	—	Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)

VIII.—*The Relative Strength of France and Germany.*[*]

THIS interesting and exhaustive statistical document is an answer to an article that appeared in a Swiss newspaper in the Spring of 1874. This article aimed at establishing by statistical data, the proposition, that in spite of its smaller population, and even smaller birth-rate, France can command a larger and more serviceable contingent in case of war than Germany.

In his introduction, the author sets forth the sources, German and French, from which he has derived his facts, and of this part of his work suffice it to observe that he has drawn from trustworthy sources.

The body of the work is divided into six sections, as follows:

1. Condition of the population.
2. Births.
3. Marriages.
4. Deaths.
5. Emigration and immigration.
6. Results of national education.

Before we notice these sections in detail, we may observe, that within the limits which the author prescribes to himself, we have a complete exposition of the relative condition of the two nations in respect of both population and education. This being understood, we proceed to give a brief notice of the contents of the several sections.

1. *Condition of the Population.*

From a table which appears at the head of this section, we gather the following facts. The year 1861 was a census year both in France and Prussia, and at that date the population for Prussia was 18,421,220, that of France being 37,472,732. This is the only year in which the census was taken simultaneously in the two countries. The next census year in Prussia was that of 1864, and during the time that had elapsed since the last census, the population had increased by 0·72, whilst that of France had only increased by about 0·38.

The last year mentioned in the table is that of 1869, when the population of Prussia was 24,325,405, and that of France 38,469,282. Thus, the population of the former country increased by 5,834,183, and that of the latter by 996,550 during the years 1861-69.

It is true that this immense increase in the population of Prussia may partially be accounted for by taking into consideration the territories she acquired during and after the wars of 1864 and 1866; yet France during the same period enjoyed comparative peace, being only engaged in wars abroad. These wars being remote from home, and the number of men despatched from the mother country having been comparatively small, could have had but little influence on the increase or decrease of her population. The second table in this section bears reference to the unfortunate years 1871-72.

Before examining this table, it will be well to note that the French territory under consideration is the France of to-day, that is *minus* the provinces ceded to the German Empire in 1872. The figures of this table accordingly do not comprise the population of the ceded territories. In 1871, the population of

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[*] "Die Volkskraft Deutschlands und Frankreichs." Statistische Skizze von A. Freiherr von Fircks. Berlin, 1875.

Prussia amounted to 24,639,706, being an increase of +0·71 per cent., and in France to 36,544,067 being a decrease of – 1·21. In the year 1872, the population of France is calculated up to the 1st July, when the census was taken. At that period, the population showed a further decrease of 441,146, against an increase in Prussia of 174,722. "If," says the author, "the proportion of the increase and decrease in the populations of the two countries were to remain the same, then, in twenty years, five months and twenty-three days, counting from the end of 1871, the populations of France and Prussia would be the same. In the spring of 1892, the population of France and Germany would be 28,481,450. At the end of the same period, the German Empire, whose increase of population, counting all losses during time of war, has been fixed at an average rate of 0·62 per cent. for the four years 1867-71, would have a population of 46,603,740. In the year 1902 France would only have half the amount of population of the German Empire, provided the proportion in the increase and decrease of the populations of the two countries remained the same.

2. *Births.*

Before entering on this section of the work under consideration it will be necessary to take notice of the difference existing in France and Prussia, as to the mode of registering the births. Under births in Germany are comprehended the number of all children, whether born alive or still-born, whilst the French term "naissances" only comprehends those born alive. And, further, the idea comprehended in the term *mort-nés* is not identical with that of the German term "Todtgeborenen"—the latter meaning those who are brought into the world dead—while in France, under *mort-nés* are counted all those who die before their birth has been registered. It is evident, therefore, that in comparing the birth-rates of France and Prussia a large number will be found in France under the heading *mort-nés*, which in Prussia would be placed under the heading "births." The table in this section that bears on the subject is a very curious one. It compares the birth-rates of the two countries, including the still-born, for the twelve years 1861-72. From this table it would appear that the birth-rate in France has always been very much lower than that in Prussia. In 1861 the total number of births in France amounted to 1,050,102 whilst in Prussia it was 723,018—thus giving apparently a large majority in favour of the former country. But, in reality, the birth-rate in Prussia for the year 1861 was much higher than it was in France during the same year, for the figures just quoted yield only 28·02 per 1,000 inhabitants for France, whilst for Prussia they give 39·10 for the same number of the population. In the next year, curiously enough, the birth-rate falls in both countries, it being in France, 27·65; and in Prussia 38·54 per 1,000 inhabitants. The next year to which we would refer in this table is 1866. In that year the birth-rate in Prussia was as high as 40·83 per 1,000 inhabitants, whilst in France it had fallen to 27·59 per 1,000. After that year (1866) the birth-rate gradually decreased in both countries, until, in 1871 it had fallen in Prussia to 35·19, and in France to 23·71 per 1,000 inhabitants. For the year 1872 the births are given for Prussia alone. They had risen to 1,023,005, or 41·23 per 1,000 of the population. The whole table taken in its integrity gives a yearly average of 144·69 per 1,000 inhabitants for Prussia, and only 100·00 for France.

The next table given in this section bears reference to the number of still-born and illegitimate children in the two countries. Under the first of these headings the numbers for 1861-72 were much higher in France than in Prussia. Of the whole period from 1861-72, 1871 was the most unfavourable for France; as the number of still-born (*mort-nés*) was 40,315 or 4·653 per cent. of all children born; whilst in Prussia it was only 34,926 or 4·028 per cent. The following table showing the steady increase of *mort-nés* in France during the last twenty years is of sufficient interest to warrant its insertion *in extenso*.

	Per Cent.
1851-55	3·91
'56-60	4·30
'61-65	4·36
'66-68	4·48
'69	4·56
'70	4·57
'71	4·65

With regard to the second heading of this table "Illegitimate Births," including only illegitimate children born alive—it is remarkable how the number of births under this heading increased in Prussia from the years 1861-66. In 1861 the number was 39,653, and in 1866, 65,614. In this respect France compares favourably with Prussia; which in 1861 had 76,697 illegitimate births. This number did not fluctuate much during the years following, until 1871, when the number was as low as 59,097 against 64,677 in Prussia. Now, as it is a well known fact that a large proportion of the illegitimate children of the whole of France are born in Paris, the strict law respecting prostitutes which came into operation in Paris at the beginning of the war may account for part of this diminution. The number of illegitimate births in the year immediately preceding the framing of this law was 70,415, showing an actual falling off of 11,318. It is true that there was also a decrease in the number of illegitimate births in Prussia at the same period, the number for 1870 being 74,351, and that for 1871 64,677, being an actual decrease of 9,664. But as no such law as that put in force in Paris was promulgated in any part of Prussia, and as the moral state of the provinces of Prussia—that is of those parts remote from Berlin—is much lower than of those distant from Paris, this diminution can only be ascribed to the absence from Prussia of so large a portion of its adult male population. The author of this work, strange to say, wholly ignores this part of the table. The third portion of this section, treating of males and females born in the two countries, shows that the number of males born in Prussia was largely in excess of those born in France. In Prussia the average number of males born for every 100 females for the years 1861-68 was 105·1, whilst in France it was 105·00. The last year for which this comparison between the two countries is made is the year 1871, when in Prussia 105·0, and in France 104·87 males were born for every 100 females. The fourth part of this section treats of the multiple births in the two countries. In this respect Prussia is especially prolific, as the following short table for the years 1869-71 (the only ones that admit of comparison) will show:—

Years.	Twins.		Triplets.		Quartets.
	Prussia.	France.	Prussia.	France.	Prussia.
1869	11,628	9,367	185	88	3
'70	12,420	8,204	170	78	3
'71	10,175	7,834	124	73	3

3. *Marriages.*

From a table given in this section, it would appear that the number of marriages has sensibly decreased in France during the years 1861-71. In 1861, the number of marriages in France was 305,202, or 8·2 per 1,000; whereas in 1870, the number was as low as 223,705, or 6·0 per 1,000 of the population, and in 1871 262,476, or 7·2 per 1,000. In Prussia in 1861, the number was 146,992, or 7·9 per 1,000 inhabitants. From this year, the number went on steadily increasing, until in the year 1867 it was as high as 222,446, or 9·2 per 1,000. In 1871, it fell again to 7·2 per 1,000, but in 1872 it again rose to 12·9 per 1,000.

During the whole period from 1861-71, there were, on an average, only 7·7 marriages per 1,000 inhabitants in France, against 8·4 per 1,000 in Prussia.

Paragraph 8 of this section compares the number of marriages with the number of marriageable persons (both sexes) in the two countries. It would appear that on an average, out of every 1,000 marriageable inhabitants in Prussia, 120·1 males and 162·3 females remained unmarried; whilst in France the respective numbers were males, 132·85; females, 165·9. In Prussia, the number of persons who married out of every 100 of the marriageable population increased from the years 1861-72, both as regards males and females. The years of the wars 1866-71 are, however, exceptions to this rule. In France, the number of marriages per 100 marriageable persons decreased after the year 1861—for both sexes—down to 1869, when, curiously enough, there was a decided increase in both males and females in this respect. The following table is interesting.

Of every 100 Persons in each Sex Married as follows:—

Years.	Males.		Females.	
	Prussia.	France.	Prussia.	France.
1861	6·6	6·2	4·9	5·0
'62	7·0	6·1	5·2	4·9
'63	7·2	6·0	5·3	4·8
'64	7·2	5·9	5·3	4·8
'65	7·6	5·9	5·6	4·7
'66	6·5	5·9	4·8	4·8
'67	7·6	5·9	5·6	4·8
'68	7·3	5·9	5·4	4·8
'69	7·3	6·2	5·4	5·0
'70	6·2	4·5	4·5	3·6
'71	6·6	5·4	4·9	4·3
'72	10·7	—	8·0	—

It would appear that persons contracting marriages in France are much older than they are in Prussia. "But," says the author, "marriage for the majority of the population, and especially for the female portion of it, is the commencement of domestic independence. If this era falls late in life for a whole nation, it must be taken as an unfavourable indication of the existing social circumstances."

That the population of Prussia is more prolific than that of France is shown by a comparative table of the average births per marriage in the two countries during the years 1861-71. It must, however, be understood that in this case, only those children born alive are counted. In 1861, the average births per marriage in

Prussia were 4·71, against 3·29 in France. In 1866, they were 5·04 in Prussia, and 3·31 in France. In 1870, they were still higher in Prussia, viz., 5·17 against 4·22 in France. The next year being that of the war (1871), they naturally fell in both countries, being then 4·25 in Prussia, and 3·15 in France. In 1872, the number is given for Prussia alone when it was 3·85. In that year the average was lower than in any of the years 1861-72, the next lowest average being in 1867, when it was 3·98.

4. *Deaths.*

Under the above heading are comprised all the cases of children still-born. The comparison between the two countries is made in this section, as in the preceding ones for the years 1861-71, the figures for 1872 being again given for Prussia alone.

The rate of mortality throughout the years 1861-71, appears to have been higher in Prussia than in France. In 1866, this would naturally have been the case, owing to the war in which Prussia was engaged. In that year, the rate in Prussia was 30·6 per 1,000, against 24·4 in France. But in the two war-years 1870-71, the rate of mortality was higher in France than in Prussia, being 28·7 and 30·0 per 1,000 in Prussia, against 29·5 and 35·9 in France. But, according to the author, the numbers given for France are not correct: the death-rate ought to be much higher. He bases this statement on the facts, that quantities of bodies were found on the battle fields, and buried without being, as is usually the case, registered, and that a large number of the battles were fought on territory now belonging to Germany; consequently the number of those that fell was not registered in France. He accounts for the high rate of mortality in Prussia as compared with that of France, by the fact that the birth-rate is likewise higher in the former than in the latter country, the death-rate being always much higher amongst children than among adults. According to a table given in this section, in which the excess of the birth-rates over the death-rates of the two countries are compared, France suffers greatly by comparison with Prussia. In 1861, the surplus of births over deaths per 1,000 inhabitants was in Prussia 12·2, and in France 3·4. In 1864, it had risen in Prussia to 15·0, whilst in France it was but 3·9. In 1868, the surplus in France had fallen as low as 1·6, against 9·5 in Prussia. In 1870-71, the surplus in Prussia was 10·3 and 5·2, whilst in France it was 2·8 and 12·2. According to the author, three things contributed to bring about so high a rate of mortality in France in 1871 (6·4 per 1,000 more than in 1870).

1. "Gambetta's levy *en masse*. Through this, a number of young men were called out who had not undergone sufficient training for the fatigues of camp life and military duties.

2. "The hard winter of 1870-71, which the French troops, in open field, felt more than the German army already inured to a cold climate.

3. "The Commune, and the subjection of the Capital, by the newly formed French army."

From a perusal of Part 4 in this section, it would appear that fewer males die in France than in Prussia. The numbers for 1870-71 were in Prussia 116 and 108 males for every 100 females, against 112 and 120 in France; "but," says the author, "these numbers are not high enough for France—for the reasons before given."

5. *Emigration and Immigration.*

From the very short section under this heading it would appear that in France nearly twelve times as many people emigrated during the years 1869-71 as during the nine preceding ones. As the class that emigrate is generally the one on whom a vast capital has been spent in the way of national education, &c., and to whom the State naturally looks for a return in the shape of surplus wealth for the capital expended on it; and as more men than women emigrate, it stands to reason that a large amount of wealth is lost to the nation at large. Taking as a basis that Prussia loses through the emigration of a single person 1,000 thalers or 150*l.*—the average yearly amount lost by that country during the period 1869-71 was no less than 66,000,000 thalers, or 9,900,000*l.* France, though a smaller amount of her population emigrated, lost about the same amount, as the cost of education is higher there than in Prussia. It would appear, however, that emigration in Prussia is decreasing, as in 1872, 62,192 more persons emigrated than immigrated, whilst in 1873 the number had fallen to 44,089.

6. *Results of National Education.*

The percentage of the whole population of France that can neither read nor write is as high as 30·77. Of these 27·41 per cent. were males, and 33·47 females. In Prussia the percentage for the males is 9·50, and for the females 14·73. In this case the first educational year taken is that of 10 for both countries; though in Prussia children are bound to be sent to school at the age of 5, and in Westphalia at 6 years of age. This being the case, it may naturally be supposed that there are a large number of children in Prussia under 10 years of age who already possess a certain proficiency in reading and writing. Comparing the districts of Prussia with the departments of France the lowest percentage in any one of the districts of Prussia was something under 5 per cent., whilst in France it was over 5. The highest percentage of illiterates in any district of Prussia was between 41 and 45 per cent. against a percentage of between 61 and 65 in France. The third portion of this section treats of the education of the reinforcements for the army and navy of Germany and France. The number of men yearly drawn in Germany is 143,050 for the army and 2,500 for the navy (marine troops). Besides there are yearly about 18,000 army and 2,500 navy recruits, forming a sort of reserve; and further, there are on an average 14,250 who, after passing an examination, have the right to serve in the army only one year instead of the number of years prescribed by the Prussian State. In France, about 157,000 men are yearly drawn, viz., 150,000 for the army and 7,000 for the navy. The number of "one year volunteers," as they are called, being on an average about 6,450. In the years 1872-73 the percentage of men in the German army who could not read was 4·6, in the navy 2·3, all the "one year volunteers," from the nature of the examination they have to pass in order to qualify, being efficient. In the French army the percentage was 23·0, in the navy 14·0, and amongst the "one year volunteers," who in France do not, as in Germany, pass an examination, but, for 1,500fr., purchase the right, the percentage was as high as 55·0.

From Part 4 of this section, we gather that France spends a very small portion of her revenue on National Education. In Germany, out of every 10,000 inhabitants, 1,520 are educated in the national schools; whilst in France the number is 1,160. The author pays a high compliment to the intelligence of the French, but he goes on to say, that "The instruction given in the middle class schools in France is not such as to lay either a good foundation for future progress, or to mature the natural intelligence of the people. Of late years, the class of teachers has become worse, and, as a natural consequence, a further retrograde movement in the national education is to be expected. The number of lay teachers has decreased, whilst the number of monks and nuns engaged in education has rapidly increased."

The following numbers fully bear out the author's statement respecting the increase of this latter class of teachers. In 1843, there were 1,094 monks and 6,496 nuns at the head of different schools; in 1863, the former had increased to 2,502, and the latter to 14,704, while the number of children educated in these schools increased from 706,917 to 1,610,674 in these twenty years. In 1869, 33,546 nuns educated 55½ per cent. of all girls in France. In 1872, out of 17,351 public schools for girls, 9,008 were under the direction of nuns, and out of 11,075 private girls' schools, 5,332. Hence, a fourth part of all girls, and the same proportion of all boys frequenting national schools are educated by monks and nuns. "These circumstances," says the author, "point with certainty to a rapid decay of general education in France."

Conclusion.

"The accounts given under the several sections showing the state and movement of the population of France taken together, present the picture of a people growing old and decrepit. The average age of the population has risen to 31½ years, whilst in Germany it is 29. The youthful portion decreases in number and vitality, and the marriageable part of it forms a very minute fraction of the whole nation. Mortality and emigration are on the increase. A still further decrease in the number of the population, and, at the same time, a relative diminution of males is therefore to be expected. The number of young men counted fit for military service every year in these two countries (in France estimated at 163,000, and in Germany at 166,000) cannot be taken to invalidate the conclusion arrived at by comparing the state of the population of the two countries, nor would it even tend to make such conclusion less probable; as it is well known that a lower standard is taken in France than in Germany with regard to qualification for military service.

"But the French nation has not only gone backwards physically, but also intellectually; and as all public instruction is by degrees being confided to the various ecclesiastical societies—the nation will become more and more weaned from independent thinking, and in consequence, a more docile and powerless tool of the Roman Church."

We give the "conclusion" in the author's own words; and from this, as well as from what has gone before, it will be seen that he has written with a strong national bias. But, making all due allowance for this natural partiality, his work is a valuable one. It will be understood that we have only been able to glance rapidly at the various sections, omitting a great deal as being irrelevant in a statistical point of view; yet, on the whole, assuming the correctness of the author's figures (and there is no reason to suppose that they are inexact), France does not compare favourably with Prussia.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED SEPTEMBER, 1874.

BIRTHS AND DEATHS—QUARTER ENDED DECEMBER, 1874.

A.—*Serial Table of* MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1874-68, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1874-68:—*Numbers.*

Years	'74.	'73.	'72.	'71.	'70.	'69.	'68.
Marriages No.	—	205,460	201,267	190,112	181,655	176,970	176,962
Births .... „	854,307	831,809	825,907	797,428	792,787	773,381	786,858
Deaths .... „	526,701	494,003	492,265	514,879	515,329	494,828	480,622

QUARTERS *of each Calendar Year*, 1874-68.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'74.	'73.	'72.	'71.	'70.	'69.	'68.
March........ No.	41,417	41,209	40,539	36,305	36,455	37,752	36,696
June .... „	52,737	53,332	50,380	48,831	46,720	43,202	45,364
September „	49,014	49,658	49,818	46,536	43,900	43,978	43,509
December „	—	61,261	60,530	58,440	54,580	52,038	51,393

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'74.	'73.	'72.	'71.	'70.	'69.	'68.
March........ No.	214,437	216,367	208,752	209,523	206,366	203,775	198,584
June .... „	217,605	206,618	208,790	201,165	203,615	188,618	202,839
September „	209,898	203,609	201,746	193,271	192,521	190,394	192,583
December „	212,367	205,215	206,619	193,469	190,285	190,594	192,852

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'74.	'73.	'72.	'71.	'70.	'69.	'68.
March........ No.	136,528	132,626	134,952	138,393	143,773	133,096	119,676
June .... „	123,990	118,751	120,835	120,793	121,128	118,947	110,010
September „	124,099	114,343	118,927	121,332	124,297	114,644	130,482
December „	142,084	128,283	117,551	134,361	126,131	128,141	120,454

Annual Rates of MARRIAGES, BIRTHS, *and* DEATHS, *per* 1,000 PERSONS LIVING *in the Years* 1874-68, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1874-68:—*General Ratios.*

YEARS............	'74.	Mean '64-73.	'73.	'72.	'71.	'70.	'69.	'68.
Estmtd. Popln. of England *in thousands* in middle of each Year....	23,649,	—	23,356,	23,068,	22,783,	22,501,	22,223,	21,949,
Persons Married	—	16·9	17·6	17·5	16·7	16·1	15·9	16·1
Births	36·1	35·4	35·6	35·8	35·0	35·2	34·8	35·8
Deaths................	22·3	22·4	21·2	21·3	22·6	22·9	22·3	21·9

QUARTERS *of each Calendar Year,* 1874-68.

(I.) PERSONS MARRIED:—*Ratio per* 1,000.

Qrs. ended last day of	'74.	Mean '64-73.	'73.	'72.	'71.	'70.	'69.	'68.
March	14·2	13·9	14·3	14·1	12·9	13·2	13·8	13·5
June....................	17·9	17·2	18·3	17·5	17·2	16·7	15·6	16·6
September	16·4	16·5	16·9	17·1	16·2	15·5	15·7	15·8
December	—	20·0	20·8	20·8	20·4	19·2	18·6	18·6

(II.) BIRTHS:—*Ratio per* 1,000.

Qrs. ended last day of	'74.	Mean '64-73.	'73.	'72.	'71.	'70.	'69.	'68.
March	36·8	37·1	37·6	36·3	37·3	37·3	37·3	36·4
June....................	36·9	36·1	35·5	36·3	35·5	36·4	34·1	37·2
September	35·2	34·3	34·6	34·7	33·7	34·0	34·1	34·9
December	35·6	34·2	34·9	35·5	33·7	33·6	34·1	35·0

(III.) DEATHS:—*Ratio per* 1,000.

Qrs. ended last day of	'74.	Mean '64-73.	'73.	'72.	'71.	'70.	'69.	'68.
March	23·4	24·9	23·0	23·5	24·7	26·0	24·4	21·9
June....................	21·0	21·6	20·4	21·0	21·3	21·6	21·5	20·2
September	20·8	21·2	19·4	20·5	21·1	22·0	20·5	23·7
December	23·8	22·2	21·8	20·2	23·4	22·3	22·9	21·8

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE *in each of the Nine* QUARTERS *ended December*, 1874.

1	2	3	4	5	6	7	8	9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcase), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.
				Beef.	Mutton.		In-door.	Out-door.	
	£		*s.* *d.*	*d.* *d.* *d.*	*d.* *d.* *d.*	*s.* *s.* *s.*			*s.* *d.*
1872 Dec. 31	92⅞	5·9	57 3	5½—8 6¾	6—8½ 7¼	153—187 170	138,662	675,644	26 5
1873 Mar. 31	92⅞	3·9	55 10	5½—8 6¾	6¼—9 7⅝	179—235 207	150,381	703,377	33 1
June 30	93⅜	5·2	56 5	6—8¾ 7⅜	6¾—9½ 8⅛	183—242 212	135,638	666,261	29 3
Sept. 30	92⅛	3·8	61 4	5¾—8¾ 7¼	6½—9¼ 7⅞	95—120 107	127,672	632,417	30 1
Dec. 31	92⅛	6·3	61 1	5—8½ 6¾	5¾—8½ 7⅛	96—117 107	137,409	625,316	30 8
1874 Mar. 31	92	3·6	62 2	5¼—8¼ 6¾	5½—8¼ 6⅞	112—127 119	146,082	641,910	23 5
June 30	93	3·4	61 1	5—8 6½	5—8¼ 6⅝	135—165 150	133,846	614,738	23 7
Sept. 30	92⅝	3·0	55 5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,996	592,958	23 3
Dec. 31	93	4·7	44 4	4⅞—8¼ 6½	4¾—8 6¼	73—96 84	138,899	587,776	24 7

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-70.	1873. Quarters ending		1874. Quarters ending			
		Sept.	Dec.	March.	June.	Sept.	Dec.
England and Wales	22·4	19·4	21·8	23·4	21·0	20·8	23·8
I. London	24·3	21·8	25·3	23·7	19·9	20·6	26·2
II. South-Eastern counties	19·1	15·8	16·3	19·5	17·1	15·9	17·5
III. South Midland ,,	20·2	16·5	17·8	20·1	17·5	17·0	19·5
IV. Eastern counties	20·1	17·3	17·7	20·4	18.8	16·7	19·2
V. South-Western counties	19·9	15·0	17·9	21·4	18·8	16·6	18·8
VI. West Midland ,,	21·8	18·3	21·5	23·3	20·4	20·2	22·9
VII. North Midland ,,	20·8	18·5	19·5	21·6	19·6	20·6	23·3
VIII. North-Western ,,	26·3	23·1	24·4	27·4	25·7	26·5	29·6
IX. Yorkshire	24·0	21·8	23·3	23·4	22·5	23·8	27·6
X. Northern counties	22·7	23·5	25·1	26·3	24·2	25·2	26·7
XI. Monmouthshire and Wales	21·6	17·4	21·7	26·0	23·7	20·0	22·8

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1874-72.

	Area in Statute Acres.	Population Enumerated. 1871.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years 1874.	Mean '64-73.	1873.	1872.
In 131 Districts, and 59 Sub-districts, comprising the *Chief Towns*	3,183,965	12,892,982	March ..	25·2	27·0	24·5	25·4
			June	22·5	23·1	21·6	22·6
			Sept.	23·5	23·9	22·0	23·1
			Dec.	26·7	24·8	24·7	22·2
			Year	24·5	24·7	23·2	23·4
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,135,256	9,819,284	Year	19·3	19·5	18·5	18·6
			March ..	20·9	22·4	21·1	20·9
			June	19·1	19·5	18·8	18·8
			Sept.	17·2	17·4	16·0	17·0
			Dec.	19·9	18·6	17·9	17·6

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the Fourth Quarter of* 1874, *in* TWENTY-ONE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1874.	Births in 13 Weeks ending 2nd Jan., 1875.	Deaths in 13 Weeks ending 2nd Jan., 1875.	Annual Rate to 1,000 Living during the 13 Weeks ending 2nd Jan., 1875. Births.	Deaths.	Mean Temperature in 13 Weeks ending 2nd Jan., 1875.	Rainfall in Inches in 13 Weeks ending 2nd Jan., 1875.
Total of 21 towns in U. K.	7,618,655	70,974	54,841	37·4	28·9	41·0	8·88
London	3,400,701	31,051	22,168	36·6	26·2	41·7	70·2
Portsmouth........................	120,436	955	577	31·8	19·2	—	10·54
Norwich	82,257	642	541	31·3	26·4	40·3	5·15
Bristol........................	192,889	1,805	1,193	37·6	24·8	42·4	9·43
Wolverhampton................	70,896	703	472	39·8	26·7	40·4	7·20
Birmingham	360,892	3,723	2,537	41·4	28·2	41·3	8·00
Leicester........................	106,202	986	727	37·3	27·5	40·4	7·40
Nottingham	90,894	769	633	34·0	28·0	40·1	5·61
Liverpool........................	510,640	5,000	4,830	39·3	38·0	42·2	9·22
Manchester........................	355,339	3,382	2,913	38·2	32·9	40·5	11·78
Salford........................	133,068	1,420	1,089	42·8	32·8	40·3	12·16
Oldham	86,281	891	691	41·4	32·1	—	—
Bradford	163,056	1,578	1,289	38·8	31·7	40·5	8·00
Leeds	278,798	2,888	2,021	41·6	29·1	41·2	7·61
Sheffield	261,029	2,799	1,957	43·0	30·1	41·4	8·74
Hull........................	130,996	1,346	1,064	41·2	32·6	39·2	8·32
Sunderland........................	104,378	1,022	698	39·3	26·8	43·3	8·24
Newcastle-on-Tyne	135,437	1,388	1,068	41·1	31·7	—	—
Edinburgh	211,691	1,667	1,411	31·6	26.8	—	—
Glasgow	508,109	4,871	4,824	38·5	38·1	—	—
Dublin........................	314,666	2,088	2,138	26·6	27·3	43·2	8·64

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended* 30*th September*, 1874-72; *and* BIRTHS *and* DEATHS *in Quarters ended* 31*st December*, 1874-72.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (*Persons.*)	MARRIAGES in Quarters ended 30th September.		
			1874.	1873.	1872.
		No.	No.	No.	No.
ENGLD. & WALES....*Totals*	37,319,221	22,712,266	49,014	49,658	49,806
I. London	75,362	3,254,260	8,883	8,892	8,892
II. South-Eastern	3,994,431	2,167,726	3,917	3,832	3,830
III. South Midland	3,201,325	1,442,654	2,341	2,463	2,521
IV. Eastern	3,211,441	1,218,728	1,861	1,856	1,953
V. South-Western	4,981,170	1,880,777	3,125	3,227	3,274
VI. West Midland	3,945,460	2,720,669	5,623	5,890	5,892
VII. North Midland	3,535,445	1,406,935	2,824	2,921	2,719
VIII. North-Western	1,998,914	3,389,044	8,557	8,546	9,043
IX. Yorkshire	3,702,384	2,395,569	5,639	5,675	5,438
X. Northern	3,547,947	1,414,234	3,354	3,405	3,390
XI. Monmthsh. & Wales	5,125,342	1,421,670	3,393	2,951	2,854

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 31st December.			DEATHS in Quarters ended 31st December.		
	1874.	1873.	1872.	1874.	1873.	1872.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....*Totals*	212,367	205,215	206,093	142,084	128,283	117,373
I. London	31,051	31,905	29,010	22,168	22,740	16,336
II. South-Eastern	17,677	17,508	17,629	10,058	9,261	9,024
III. South Midland	12,124	12,028	12,446	7,358	6,629	6,649
IV. Eastern	9,855	9,626	10,038	6,037	5,514	5,615
V. South-Western	13,840	13,624	14,342	8,969	8,534	8,460
VI. West Midland	26,301	24,920	25,676	16,270	15,114	14,427
VII. North Midland	13,253	12,788	12,584	8,512	7,047	6,911
VIII. North-Western	34,455	32,175	33,672	26,525	21,498	20,676
IX. Yorkshire	24,585	23,433	23,705	17,614	14,616	13,907
X. Northern	15,953	14,967	14,904	10,165	9,891	8,172
XI. Monmthsh. & Wales	13,273	12,241	12,087	8,413	7,939	7,196

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* These are revised figures, and will be found to differ somewhat from those hitherto published.

G.—*General Meteorological Table, Quarter ended December*, 1874.

[Abstracted from the particulars supplied to the Registrar-General by James Glaisher, Esq., F.R.S., &c.]

1874. Months.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames				
	Mean.	Diff. from Average of 103 Years.	Diff. from Average of 33 Years.	Mean.	Diff. from Average of 33 Years.	Mean.	Diff. from Average of 33 Years.	Mean.	Diff. from Average of 33 Years.		Mean.	Diff. from Average of 33 Years.	Mean.	Diff. from Average of 33 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
Oct. ...	51·7	+2·1	+1·5	50·2	+2·0	48·7	+2·6	13·8	−1·1	54·9	·344	+·031	3·9	+0·3
Nov. ...	42·0	−0·8	−1·6	40·3	−1·1	38·3	−1·3	11·8	+0·1	47·5	·231	−·017	2·7	−0·1
Dec. ...	33·2	−5·9	−7·1	32·1	−6·7	29·9	−7·1	9·3	−0·2	35·7	·166	+·056	2·0	−0·6
Mean ...	42·3	−1·4	−2·4	40·9	−1·9	39·0	−1·9	11·6	−0·4	46·0	·247	−·014	2·9	−0·1

1874. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
										Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from Average of 33 Years.	Mean.	Diff. from Average of 33 Years.	Mean.	Diff. from Average of 33 Years.	Amnt.	Diff. from Average of 59 Years.		At or below 30°.	Between 30° and 40°.	Above 40°.		
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
Oct. ...	90	+ 3	29·708	+ ·009	537	− 2	3·6	+0·9	293	5	12	14	27·7	51·9
Nov. ...	87	− 1	29·779	+ ·025	550	+ 2	1·9	−0·4	259	16	11	3	18·3	44·9
Dec. ...	88	0	29·612	− ·194	567	+ 5	1·7	−0·3	285	25	6	0	12·0	32·0
Mean ...	88	+ 1	29·700	− ·053	548	+ 2	Sum 7·2	Sum +0·2	Mean 279	Sum 46	Sum 29	Sum 17	Lowest 12·0	Highest 51·9

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for October was 51°·7, being respectively 2°·1 and 1°·5 higher than the averages of 103 years, and the preceding 33 years. It was 3°·9 higher than that of 1873 and 1872 respectively.

The mean temperature of November was 42°·0, being 0°·8 lower than the average of 103 years, and 1°·6 lower than that of the preceding 33 years; and 2°·2 and 3°·3 respectively lower than those recorded in the month of November in the years 1873 and 1872.

The mean temperature of December was 33°·2, being 5°·9 and 7°·1 respectively lower than the averages of 103 years, and the preceding 33 years; it was 7°·4 and 9°·7 lower than the corresponding value in 1873 and 1872.

The mean high day temperatures of the air were 0°·6 and 7°·1 lower than their respective averages in November and December, and 1°·1 higher in October.

The mean low night temperatures of the air were respectively 0°·7 and 7°·0 lower than their respective averages in November and December, and 2°·1 higher in October.

The mean daily ranges of temperature were 1°·1 and 0°·2, lower than their respective averages in October and December, but 0°·1 higher in November.

H.—*Special Meteorological Table, Quarter ended* 31*st December*, 1874.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·617	63·0	27·0	36·0	23·3	8·2	47·9	85
Osborne	29·628	66·9	23·1	43·8	30·3	11·2	44·3	91
Barnstaple	29·616	64·0	24·0	40·0	26·8	10·1	46·9	84
Royal Observatory	29·631	69·6	18·5	51·1	35·3	11·6	42·3	88
Royston	29·632	68·0	13·8	54·2	37·6	12·9	41·7	88
Norwich	29·583	65·0	10·0	55·0	34·8	10·8	41·6	93
Llandudno	29·591	67·5	21·6	45·9	28·1	9·7	45·6	79
Derby	29·590	63·0	16·0	47·0	31·7	9·9	41·5	90
Stonyhurst	29·587	63·0	13·0	50·0	33·1	11·6	40·7	84
Bradford	29·598	62·0	15·0	47·0	29·9	9·7	41·3	87
North Shields	—	61·8	6·8	55·0	33·8	10·2	40·4	82

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·6	8	5	7	10	6·4	63	18·29
Osborne	0·4	7	5	8	10	7·4	53	10·91
Barnstaple	1·4	9	5	7	10	4·5	61	14·60
Royal Observatory	0·5	6	5	8	11	6·8	39	7·12
Royston	—	5	3	12	11	6·6	45	6·16
Norwich	—	5	4	10	12	—	50	6·44
Llandudno	0·9	5	5	9	11	6·5	62	13·49
Derby	—	8	4	5	13	—	—	6·51
Stonyhurst	—	6	5	7	13	7·1	68	16·20
Bradford	0·9	7	4	7	13	6·9	42	8·21
North Shields	1·6	10	4	4	12	6·8	64	8·75

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 31ST DECEMBER, 1874.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1874-70 *inclusive.*

	1874.		1873.		1872.		1871.		1870.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	29,837	3·45	30,210	3·52	29,506	3·47	28,902	3·43	28,665	3·44
Deaths........	20,775	2·40	21,443	2·50	21,245	2·50	19,756	2·34	22,198	2·66
Marriages ..	6,777	0·78	6,618	0·77	5,820	0·68	5,415	0·64	5,647	0·67
Mean Temperature	40°·9		38°·1		40°·7		39°·1		36°·9	
2nd Quarter—										
Births	32,295	3·73	31,283	3·64	30,726	3·61	30,583	3·63	30,636	3·67
Deaths........	19,640	2·27	19,931	2·32	19,045	2·24	18,715	2·22	18,027	2·15
Marriages ..	6,730	0·78	6,690	0·78	6,898	0·75	5,946	0·70	5,770	0·69
Mean Temperature	49°·53		49°·2		49°·2		48°·7		51°·0	
3rd Quarter—										
Births	30,702	3·55	28,975	3·38	29,181	3·43	28,689	3·40	28,263	3·39
Deaths........	18,099	2·09	17,072	1·99	16,692	1·96	16,835	2·00	16,573	2·03
Marriages ..	5,582	0·64	5,816	0·68	5,891	0·69	5,424	0·64	5,318	0·63
Mean Temperature	56°·03		55°·4		55°·8		56°·3		57°·1	
4th Quarter—										
Births	30,961	3·58	29,270	3·41	29,460	3·46	27,953	3·32	27,826	3·26
Deaths........	22,162	2·54	18,411	2·15	18,759	2·20	19,338	2·29	17,367	2·08
Marriages ..	7,158	0·83	7,606	0·88	7,471	0·88	7,181	0·85	7,119	0·85
Mean Temperature	39°·5		42°·7		41°·8		41°·3		39°·6	
Year—										
Population.	3,462,916		3,430,923		3,399,226		3,367,922		3,336,707	
Births	123,795	3·57	119,738	3·49	118,873	3·49	116,127	3·45	115,390	3·46
Deaths........	80,676	2·33	76,857	2·24	75,741	2·22	74,644	2·22	74,165	2·22
Marriages ..	26,247	0·76	26,730	0·76	25,580	0·75	23,966	0·71	23,854	0·71

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 31st December,* 1874, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1874.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,360,018	3,462,916	30,961	3·58	28	2,794	9·0	11·1
Principal towns	1,068,556	1,136,154	10,733	3·78	26	992	9·2	10·9
Large „	332,180	354,335	3,852	4·35	23	260	6·8	14·8
Small „	778,164	796,900	7,327	3·68	27	609	8·3	12·0
Mainland rural	1,049,114	1,045,027	8,082	3·09	32	887	11·0	9·1
Insular „	132,004	130,500	967	2·96	34	46	4·8	21·0

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1874.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,360,018	3,462,916	22,162	2·54	39	7,158	0·83	120
Principal towns	1,068,556	1,136,154	9,339	3·29	30	2,635	0·93	108
Large „	332,180	354,335	2,763	3·12	32	766	0·86	116
Small „	778,164	796,900	4,736	2·38	42	1,558	0·78	128
Mainland rural	1,049,114	1,045,027	4,711	1·80	55	2,019	0·77	130
Insular „	132,004	130,500	613	1·88	53	180	0·55	181

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending* 31st *December,* 1874.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
Scotland	9·0						
Northern	6·3	Shetland	3·8	Forfar	10·8	Lanark	7·6
		Orkney	4·5	Perth	12·0	Linlithgow .	7·0
North-Western	6·1	Caithness	10·3	Fife	7·0	Edinburgh .	8·2
North-Eastern	15·3	Sutherland....	5·2	Kinross	12·8	Haddington	7·0
East Midland ..	9·9	Ross and Cromarty	4·0	Clackmannan	11·2	Berwick	11·8
						Peebles........	8·4
West Midland.	7·7	Inverness	8·0	Stirling	8·2	Selkirk	10·1
		Nairn	16·7	Dumbarton ..	6·9	Roxburgh ..	13·3
South-Western	7·4	Elgin	16·7	Argyll	7·9	Dumfries	15·1
South-Eastern.	8·3	Banff	17·5	Bute	6·5	Kirkcudbright ..	15·3
		Aberdeen	15·1	Renfrew	6·1		
Southern	14·3	Kincardine....	10·8	Ayr...............	7·7	Wigtown	13·1

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 31*st December*, 1874.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	—	—	—
I. Northern	2,261,622	127,191	189	842	457
II. North-Western........	4,739,876	166,351	241	1,146	826
III. North-Eastern	2,429,594	393,199	870	3,337	1,803
IV. East Midland	2,790,492	559,676	1,199	4,800	3,528
V. West Midland	2,693,176	251,088	410	2,105	1,559
VI. South-Western........	1,462,397	1,183,218	2,860	13,088	10,184
VII. South-Eastern	1,192,524	475,523	999	4,120	2,876
VIII. Southern	2,069,696	203,772	390	1,523	929

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 30*th September*, 1874; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 31*st December*, 1874.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,319,	22,712,	49,104	2·1	212,367	9·4	142,084	6·3
Scotland	19,639,	3,360,	5,582	1·7	30,961	9·2	22,162	6·6
Ireland	20,323,	5,412,	4,115	0·8	32,429	6·0	22,705	4·2
GREAT BRITAIN AND IRELAND	77,281,	31,484,	58,801	1·9	275,757	8·8	186,951	6·0

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. *S. J.*

I.—*Number of Occupiers of Land and of Owners of Live Stock; the Average Size of each Holding in* 1874.

1 ENGLAND. — Counties, Proper.	2 Number of Returns Obtained from Occupiers of Land.	3 Owners of Live Stock only.	4 Average Acreage of each Occupier.
South-Eastern—			
Surrey	5,792	320	51
Kent	11,451	186	63
Sussex	9,198	34	71
Southampton	8,827	90	79
Berks	4,286	37	86
Total	39,554	667	70
South Midland—			
Middlesex	3,058	618	38
Hertford	4,417	18	76
Buckingham	5,861	12	68
Oxford	4,614	9	89
Northampton	7,386	12	75
Huntingdon	3,056	15	68
Bedford	4,116	1	62
Cambridge	8,004	3	60
Total	40,512	683	67
Eastern—			
Essex	9,780	41	84
Suffolk	10,515	36	73
Norfolk	19,112	50	56
Total	39,407	127	71
South-Western—			
Wilts	7,960	6	93
Dorset	5,398	16	87
Devon	18,488	25	58
Cornwall	13,813	22	38
Somerset	17,500	14	47
Total	63,159	83	64
West Midland—			
Gloucester	11,834	34	54
Hereford	7,409	11	58
Salop	11,680	25	59
Stafford	14,051	183	42
Worcester	8,272	75	47
Warwick	7,740	786	62
Total	60,986	1,114	53

1 ENGLAND. — Counties, Proper.	2 Number of Returns Obtained from Occupiers of Land.	3 Owners of Live Stock only.	4 Average Acreage of each Occupier.
North Midland—			
Leicester	8,371	20	56
Rutland	1,362	—	63
Lincoln	26,296	89	56
Nottingham	8,356	12	53
Derby	13,670	16	37
Total	58,055	137	53
North-Western—			
Chester	13,758	49	37
Lancaster	23,040	442	33
Total	36,798	491	35
York—			
East Riding	8,561	45	78
North „	15,083	32	54
West „	31,814	162	37
Total	55,458	239	56
Northern—			
Durham	6,520	47	62
Northumberland	5,632	303	121
Cumberland	7,847	21	70
Westmoreland	3,646	9	65
Total	23,645	380	79
Total of England	417,574	3,921	57
Wales—			
Monmouth	4,869	7	47
North Wales	27,371	81	40
South „	30,364	102	54
Total of Wales	62,604	190	47
Total of Scotland	81,007	1,814	57
Total of Great Britain	561,185	5,925	56

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* See "Annual Reports" of the Registrar-General for Ireland.

II. –*Population, Area, Abstract of Acreage under Crops, &c., and Number of Live*

	Years.	England.	Wales.	Scotland.	Total for Great Britain.
Total population	1871	21,495,	1,217,	3,360,	26,072,
Total area (in statute acres)	—	32,597,	4,722,	19,496,	56,815,
Abstract of Acreage—					
Under all kinds of crops, bare fallow, and grass	1873	23,894,	2,647,	4,562,	31,103,
	'74	24,009,	2,679,	4,580,	31,267,
Under corn crops (including beans and peas)	'73	7,502,	537,	1,420,	9,459,
	'74	7,505,	516,	1,410,	9,431,
Under green crops	'73	2,749,	133,	694,	3,576,
	'74	2,764,	132,	685,	3,581,
„ bare fallow	'73	649,	35,	22,	706,
	'74	607,	32,	21,	660,
„ grass—Clover, &c. under rotation	'73	2,678,	361,	1,328,	4,367,
	'74	2,619,	365,	1,357,	4,341,
„ permanent pasture	'73	10,238,	1,582,	1,097,	12,916,
	'74	10,438,	1,634,	1,106,	13,178,
*Percentage of Acreage—**					
Under corn crops (including beans and peas)	1873	31·4	20·3	31·1	30·4
	'74	31·3	19·3	30·8	30·2
Under green crops	'73	11·5	5·0	15·2	11·5
	'74	11·5	4·9	15·0	11·5
„ bare fallow	'73	2·7	1·3	0·5	2·3
	'74	2·5	1·2	0·4	2·1
„ grass—Clover, &c. under rotation	'73	11·2	13·6	29·1	14·0
	'74	10.9	13·6	29·6	13·9
„ permanent pasture	'73	42·8	59·7	24·0	41·5
	'74	43·5	61·0	24·2	42·1
Total	—	100·0	100·0	100·0	100·0
Acreage of orchards, or of arable or grass land, used also for fruit trees	1874	146,	3,	2,	151,
Acreage of woods, coppices, and plantations	'74	1,326,	127,	734,	2,187,
Abstract of Live Stock—					
Total number of horses†	1873	979,	120,	177,	1,276,†
	'74	1,007,	124,	181,	1,312,†
„ cattle	'73	4,174,	643,	1,148,	5,965,
	'74	4,306,	665,	1,155,	6,125,
„ sheep	'73	19,170,	2,967,	7,291,	29,428,
	'74	19,860,	3,065,	7,389,	30,314,
„ pigs	'73	2,141,	211,	148,	2,500,
	'74	2,059,	213,	150,	2,423,
Number to every 100 *Acres under Crops, Fallow, and Grass—*					
Horses†	1873	4·1	4·5	3·9	4·1†
	'74	4·2	4·6	3·9	4·2†
Cattle	'73	17·5	24·3	25·2	19·2
	'74	17·9	24·8	25·2	19·6
Sheep	'73	80·2	112·1	159·8	94·6
	'74	82·7	114·4	161·3	97·0
Pigs	'73	9·0	8·0	3·2	8·0
	'74	8.6	8·0	3·3	7·7
Number of Returns Obtained—					
From occupiers of land	1874	423,	58,	81,	561,
„ owners of live stock only	'74	4,	—	2,	6,

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* Stated exclusively of the small percentages for flax and hops.

† In Great Britain only horses used for agriculture, unbroken horses, and mares kept solely for breeding, are included in the returns. The proportionate number of horses for 100 acres in Great Britain in 1874, would be increased from 4·2 7·1 by adding to the number included in the Agricultural Returns 915,000 for the estimated number of all other riptions of horses. In Ireland all descriptions of horses are included in the returns.

Stock, in each Division of the United Kingdom. [000's omitted from the quantities.]

Ireland‡	Isle of Man.	Channel Islands. Jersey.	Channel Islands. Guernsey, &c.	Total for United Kingdom.	Years.	
5,411,	54,	57,	34,	31,628,	1871	Total population
20,820,	145,	29,	20,	77,829,	—	Total area (in statute acres)
						Abstract of Acreage—
15,704,§	90,	18,	12,	46,927,	1873	Under all kinds of crops, bare fallow, and grass
15,752,§	94,	— ‖	12,	47,143,	'74	
1,931,	27,	3,	2,	11,423,	'73	Under corn crops (including beans and peas)
1,902,	26,	— ‖	2,	11,865,	'74	
1,372,	12,	6,	3,	4,971,	'73	Under green crops
1,353,	13,	— ‖	3,	4,958,	'74	
13,	1,	—	—	721,	'73	„ bare fallow
12,	1,	— ‖	—	673,	'74	
1,837,	31,	5,	1,	6,241,	'73	„ grass—Clover, &c. under rotation
1,906,	33,	— ‖	1,	6,285,	'74	
10,421,	18,	4,	5,	23,364,	'73	„ permanent pasture
10,472,	21,	— ‖	5,	23,680,	'74	
						Percentage of Acreage—*
12·3	30·5	18·5	17·4	24·3	1873	Under corn crops (including beans and peas)
12·1	28·1	—	17·0	24·1	'74	
8·7	13·8	35·3	28·2	10·6	'73	Under green crops
8·6	14·1	—	27·6	10·5	'74	
0·1	0·7	1·5	0·8	1·5	'73	„ bare fallow
0·1	0·7	—	0·6	1·4	'74	
11·7	34·7	24·6	7·8	13·3	'73	„ grass—Clover, &c. under rotation
12·1	34·6	—	8·4	13·3	'74	
66·4	20·3	20·1	45·8	49·8	'73	„ permanent pasture
66·5	22·5	—	46·4	50·2	'74	
100·0	100·0	100·0	100·0	100·0	—	Total
—	—	—	1,	—	1874	Acreage of orchards, or of arable or grass land, used also for fruit trees
325,	—	—	—	—	'74	Acreage of woods, coppices, and plantations
						Abstract of Live Stock—
532,†	6,	2,	2,	1,818,	1873	Total number of horses†
526,†	6,	— ‖	1,	1,847,	'74	
4,152,	20,	— ‖	7,	10,154,	'73	„ cattle
4,118,	20,	— ‖	6,	10,281,	'74	
4,486,	67,	—	1,	33,982,	'73	„ sheep
4,438,	84,	— ‖	1,	34,838,	'74	
1,044,	5,	7,	7,	3,564,	'73	„ pigs
1,096,	4,	— ‖	6,	3,537,	'74	
						Number to every 100 *Acres under Crops, Fallow, and Grass*—
3·4	6·4	11·4	15·2	3·9	1873	Horses†
3·3	6·1	—	15·8	3·9	'74	
26·4	22·3	58·7	57·0	21·6	'73	Cattle
26·1	20·9	—	59·6	21·8	'74	
28·6	74·4	2·1	10·1	72·4	'73	Sheep
28·2	89·7	—	10·5	73·9	'74	
6·6	5·3	40·4	57·7	7·6	'73	Pigs
7·0	4·6	—	53·4	7·5	'74	
						Number of Returns Obtained—
600,	2,297,	2,	1,731,	—	1874	From occupiers of land
—	144,	—	80,	—	'74	„ owners of live stock only

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‡ The detailed returns for Ireland will be found in the annual reports prepared by the Registrar-General and laid before arliament.

§ Including under flax, 129,432 acres in 1873, and 106,886 acres in 1874.

‖ Returns not obtained in 1874: the figures for 1873 have been used in making the Total for the United Kingdom.

III.—*Acreage under Crops and Grass and Number*

1	2	3	4	5	6	7	8	9	10	11
			Number of Acres under Crops and Grass.							
				Whereof under						
England. — Counties, Proper.	Population on 3rd April, 1871.	Total Area in Statute Acres.	Total under all kinds of Crops, Bare Fallow, and Grass.	Corn Crops.	Green Crops.	Clover and Artificial and other Grasses under Rotation.	Permanent Pasture, and Grass not broken up in Rotation (exclusive of Heath or Mountain Land).	Percentage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	Horses. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Cattle. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.
South-Eastern—										
Surrey	1,092,	483,	298,	101,	47,	30,	107,	33·9	4·3	15·6
Kent	848,	1,005,	724,	249,	84,	54,	288,	34·4	4·0	10·7
Sussex	417,	934,	653,	212,	79,	66,	264,	32·6	3·9	15·9
Southampton ..	545,	1,032,	697,	262,	137,	109,	164,	37·6	3·9	9·0
Berks...............	196,	450,	367,	150,	58,	40,	111,	40·8	3·9	10·1
Total	3,098,	3,904,	2,739,	974,	405,	299,	934,	35·8	4·0	12·2
South Midland—										
Middlesex........	2,540,	181,	115,	20,	13,	5,	77,	17·2	4·8	24·1
Hertford	192,	391,	337,	149,	44,	38,	92,	44·3	3·9	9·9
Buckingham....	176,	467,	400,	136,	35,	29,	187,	34·1	4·1	17·6
Oxford	178,	470,	412,	167,	58,	43,	137,	40·5	3·9	13·1
Northampton ..	244,	630,	555,	185,	42,	35,	273,	33·4	3·7	21·1
Huntingdon	64,	230,	208,	101,	22,	15,	59,	48·7	4·6	12·7
Bedford...........	146,	296,	257,	117,	33,	20,	75,	45·5	4·2	13·2
Cambridge	187,	525,	482,	258,	83,	49,	74,	53·4	5·4	10·0
Total	3,727,	3,190,	2,766,	1,133,	330,	234,	974,	39·6	4·3	15·2
Eastern—										
Essex...............	466,	1,055,	818,	419,	105,	71,	182,	51·1	4·9	9·8
Suffolk	349,	950,	762,	387,	123,	83,	144,	50·8	5·4	9·3
Norfolk	439,	1,356,	1,064,	460,	202,	165,	229,	43·3	5·4	11·2
Total	1,254,	3,361,	2,644,	1,266,	430,	319,	555,	48·4	5·2	10·1
South-Western—										
Wilts...............	257,	859,	739,	223,	107,	82,	311,	30·2	2·9	12·5
Dorset	196,	627,	471,	117,	62,	53,	232,	24·9	3·2	16·4
Devon	601,	1,655,	1,076,	295,	153,	178,	418,	27·4	4·6	20·1
Cornwall	362,	870,	518,	147,	60,	132,	156,	28·3	5·6	29·7
Somerset	464,	1,050,	826,	149,	68,	60,	537,	18·0	3·8	25·5
Total	1,880,	5,061,	3,630,	931,	450,	505,	1,654,	25·7	4·0	20·8
West Midland—										
Gloucester	535,	805,	643,	176,	66,	90,	297,	27·4	3·6	18·8
Hereford	125,	533,	431,	110,	35,	40,	280,	25·5	4·6	18·7
Salop	248,	841,	691,	175,	64,	74,	366,	25·3	4·0	20·8
Stafford	858,	732,	590,	121,	42,	48,	365,	20·5	3·6	24·6
Worcester........	339,	472,	391,	125,	32,	33,	185,	31·9	4·6	15·9
Warwick	634,	567,	483,	152,	33,	40,	241,	31·5	3·8	20·1
Total	2,739,	3,950,	3,229,	859,	272,	325,	1,684,	27·0	4·0	19·8

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* For the Irish Statistics,

of Live Stock in 1874. [000's omitted, consequently 3,098, = 3,098,000.]

12	13	14	15	16	17	18	19	20	21	22	23	24
SHEEP. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	PIGS. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number of Acres Under										ENGLAND. — Counties, Proper.
		Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Potatoes.	Turnips and Swedes.	Mangold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	
												South-Eastern
36·1	12·2	47,	17,	24,	4,	8,	4,	21,	8,	10,	11,	Surrey
141·0	8·8	114,	41,	49,	22,	23,	16,	30,	10,	22,	8,	Kent
88·4	6·9	104,	22,	61,	9,	15,	3,	33,	10,	21,	20,	Sussex
88·0	10·3	114,	64,	62,	7,	13,	5,	86,	10,	28,	21,	Southamptn.
83·8	11·3	66,	39,	24,	12,	8,	1,	35,	5,	14,	7,	Berks
87·4	10·1	445,	183,	220,	54,	67,	29,	205,	43,	95,	67,	Total
												South Midland
37·6	13·4	9,	2,	5,	1,	2,	3,	2,	2,	4,	1,	Middlesex
57·9	9·8	64,	44,	25,	10,	6,	2,	26,	5,	8,	13,	Hertford
74·8	10·2	60,	29,	23,	17,	7,	1,	20,	4,	9,	12,	Buckingham
85·4	11·6	65,	53,	22,	18,	8,	2,	39,	5,	11,	7,	Oxford
102·6	6·2	85,	53,	18,	23,	7,	2,	27,	5,	7,	19,	Northamptn.
74·5	9·7	49,	23,	11,	13,	6,	4,	4,	4,	7,	11,	Huntingdon
74·0	12·0	55,	29,	9,	18,	5,	5,	3,	4,	8,	12,	Bedford
67·4	9·7	130,	61,	33,	24,	8,	10,	8,	18,	20,	17,	Cambridge
71·7	10·3	517,	294,	146,	124,	49,	29,	149,	47,	74,	92,	Total
												Eastern—
49·6	12·3	201,	104,	36,	47,	30,	11,	27,	29,	33,	42,	Essex
66·3	16·1	160,	140,	12,	43,	26,	2,	61,	34,	23,	25,	Suffolk
74·8	8·6	212,	185,	27,	20,	9,	5,	142,	41,	9,	6,	Norfolk
63·5	12·3	573,	429,	75,	110,	65,	18,	230,	104,	65,	73,	Total
												South-Western
103·5	8·9	101,	65,	88,	13,	10,	4,	62,	4,	25,	17,	Wilts
111·3	8·9	49,	37,	21,	4,	5,	3,	42,	4,	9,	7,	Dorset
91·0	8·8	131,	75,	85,	1,	2,	18,	85,	25,	9,	32,	Devon
85·2	12·0	52,	52,	43,	—	—	7,	31,	11,	2,	23,	Cornwall
90·1	11·1	79,	31,	20,	15,	4,	10,	36,	10,	9,	11,	Somerset
96·2	9·9	412,	260,	202,	33,	21,	42,	256,	54,	54,	90,	Total
												West Midland
73·3	9·8	96,	39,	15,	18,	8,	7,	43,	3,	12,	13,	Gloucester
84·9	6·6	62,	20,	10,	11,	7,	3,	25,	2,	6,	11,	Hereford
76·7	9·2	90,	49,	24,	5,	6,	5,	51,	4,	3,	13,	Salop
57·3	9·6	58,	27,	27,	5,	3,	7,	26,	4,	4,	13,	Stafford
61·4	11·2	69,	18,	7,	22,	8,	5,	15,	4,	8,	14,	Worcester
83·5	9·4	79,	26,	15,	26,	7,	2,	19,	5,	6,	17,	Warwick
72·8	9·3	454,	179,	98,	87,	39,	29,	179,	22,	39,	81,	Total

see ante, Table II, p. 131.

III.—*Acreage under Crops and Grass and Number of Live*

1	2	3	4	5	6	7	8	9	10	11
			Number of Acres under Crops and Grass.							
				Whereof under						
England. — Counties, Proper.	Population on 3rd April, 1871.	Total Area in Statute Acres.	Total under all kinds of Crops, Bare Fallow, and Grass.	Corn Crops.	Green Crops.	Clover and Artificial and other Grasses under Rotation.	Permanent Pasture, and Grass not broken up in Rotation (exclusive of Heath or Mountain Land).	Percentage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	**Horses.** — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	**Cattle.** — Number to every 100 Acres under Crops, Bare Fallow, and Grass.
North Midland—										
Leicester	269,	512,	468,	111,	23,	28,	292,	23·8	3·7	29·5
Rutland	22,	95,	85,	27,	8,	7,	41,	31·4	3·7	21·2
Lincoln	437,	1,768,	1,470,	625,	238,	164,	416,	42·5	4·3	14·5
Nottingham	320,	526,	443,	164,	52,	53,	156,	37·0	4·3	18·6
Derby	379,	656,	502,	75,	21,	82,	362,	15·0	3·7	28·8
Total	1,427,	3,557,	2,968,	1,002,	342,	284,	1,267,	29·9	3·9	22·1
North-Western—										
Chester	561,	706,	515,	83,	81,	57,	341,	16·2	3·8	32·5
Lancaster	2,820,	1,208,	756,	101,	51,	78,	528,	13·3	4·4	31·6
Total	3,381,	1,914,	1,271,	184,	82,	130,	869,	14·7	4·1	32·0
York—										
West Riding	1,821,	1,716,	1,173,	249,	98,	84,	716,	21·3	4·1	21·7
East "	322,	805,	668,	281,	110,	84,	168,	42·2	5·5	13·0
North "	293,	1,362,	820,	224,	80,	75,	410,	27·4	4·6	19·5
Total	2,436,	3,883,	2,661,	754,	288,	243,	1,294,	30·3	4·7	18·7
Northern—										
Durham	685,	648,	407,	99,	35,	51,	300,	24·3	4·1	15·8
Northumberland	387,	1,290,	681,	141,	61,	92,	370,	20·8	2·7	14·4
Cumberland	220,	970,	547,	99,	45,	97,	301,	18·0	3·5	23·1
Westmorland	65,	501,	238,	21,	10,	19,	188,	8·6	3·1	25·3
Total	1,357,	3,409,	1,873,	360,	151,	259,	1,059,	17·9	3·3	19·1
Total of England	21,299,	32,229,	23,781,	7,463,	2,750,	2,598,	10,290,	31·3	4·2	17·9
Wales—										
Monmouth	196,	368,	228,	39,	13,	21,	148,	17·2	4·6	20·0
South Wales	764,	2,727,	1,571,	291,	72,	192,	980,	18·3	4·8	22·7
North "	453,	1,995,	1,108,	225,	61,	172,	602,	20·4	4·3	26·3
Total of Wales	1,413,	5,090,	2,907,	555,	146,	385,	1,782,	19·2	4·6	24·2
Total of Scotland	3,360,	19,496,	4,580,	1,413,	685,	1,357,	1,106,	30·8	3·9	25·2
Total of Great Britain	26,072,	56,815,	31,268,	9,431,	3,581,	4,340,	13,178,	30·2	4·2	19·6

* For the Irish Statistics,

Stock in* 1874—*Contd. [000's omitted, consequently 1,437, = 1,437,000.]

12	13	14	15	16	17	18	19	20	21	22	23	24
SHEEP.	PIGS.	Number of Acres Under										
Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Potatoes.	Turnips and Swedes.	Mangold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	ENGLAND. — Counties, Proper.
												North Midland
98·9	6·3	48,	29,	20,	9,	4,	2,	13,	5,	3,	14,	Leicester
127·6	4·7	11,	10,	3,	2,	1,	—	7,	—	1,	3,	Rutland
110·8	7·3	311,	162,	93,	39,	19,	38,	139,	19,	22,	24,	Lincoln
68·8	6·4	78,	46,	19,	12,	8,	5,	36,	4,	5,	18,	Nottingham
54·9	8·2	33,	13,	25,	2,	2,	3,	11,	2,	3,	12,	Derby
92·2	6·5	481,	260,	160,	64,	34,	48,	206,	30,	34,	71,	Total
												North-Western
23·7	12·4	33,	3,	41,	5,	—	18,	8,	2,	2,	3,	Chester
44·9	5·2	36,	8,	49,	6,	—	34,	11,	2,	2,	4,	Lancaster
34·3	8·8	69,	11,	90,	11,	—	52,	19,	4,	4,	7,	Total
												York—
65·7	5·9	110,	70,	50,	12,	6,	22,	62,	3,	9,	22,	West Riding
82·5	7·8	122,	64,	68,	13,	13,	9,	77,	4,	10,	23,	East "
89·2	6·6	80,	66,	61,	12,	5,	9,	60,	2,	4,	30,	North "
79·1	6·7	312,	200,	179,	37,	24,	40,	199,	9,	23,	75,	Total
												Northern—
55·4	2·9	43,	17,	34,	3,	2,	8,	23,	—	4,	22,	Durham
139·3	2·1	39,	36,	58,	5,	3,	5,	50,	—	4,	17,	Northumberland
103·0	5·0	22,	7,	68,	—	—	10,	31,	1,	1,	5,	Cumberland
146·4	2·0	2,	3,	16,	—	—	2,	8,	—	—	—	Westmorlnd.
111·0	3·0	106,	63,	176,	8,	5,	25,	112,	1,	9,	44,	Total
82·7	8·6	3,369,	1,879,	1,346,	528,	304,	311,	1,555,	314,	397,	600,	Total of England
												Wales—
93·6	7·2	20,	10,	7,	—	2,	2,	9,	1,	2,	7,	Monmouth
123·6	6·4	58,	97,	133,	—	1,	22,	40,	5,	4,	18,	South Wales
126·3	9·9	60,	56,	104,	3,	3,	25,	29,	2,	4,	14,	North "
122·5	8·1	138,	163,	244,	3,	6,	49,	78,	8,	10,	39,	Total of Wales
61·3	3·3	123,	246,	1,006,	28,	1,	160,	501,	1,	15,	21,	Total of Scotland
97·0	7·7	3,630,	2,288,	2,596,	559,	311,	520,	2,134,	323,	422,	660,	Total of Gt. Britain

see Table II, p. 131.

Trade of United Kingdom, 1874-73-72.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	Whole Years.					
	1874.		1873.		1872.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	36,238,	16,706,	35,527,	16,708,	36,974,	12,089,
Central Europe; viz., Germany, Holland, and Belgium	49,345,	45,049,	46,257,	51,084,	45,494,	54,000,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	60,357,	24,847,	59,373,	25,796,	56,206,	24,788,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	6,190,	9,266,	6,724,	10,910,	7,257,	9,887,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	17,048,	11,845,	20,952,	15,000,	22,827,	15,671,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	1,444,	597,	1,550,	444,	1,165,	420,
Western Africa	1,913,	881,	1,929,	1,125,	2,011,	1,090,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	362,	397.	104,	280,	141,	255,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	2,889,	1,768,	1,985,	1,224,	2,298,	1,171,
South Sea Islands	70,	—	42,	94,	116,	—
China, including **Hong Kong**	12,540,	9,715,	13,949,	9,979,	14,613,	11,491,
United States of America	74,109,	28,035,	71,486,	33,561,	54,665,	40,738,
Mexico and Central America	1,660,	1,383,	1,893,	1,529,	1,561,	1,131,
Foreign West Indies and Hayti	4,526,	2,972,	5,766,	4,122,	6,025,	4,682,
South America (Northern), New Granada, Venezuela, and Ecuador	1,324,	3,147,	1,483,	3,715,	1,380,	3,761,
" **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	9,537,	4,386,	10,675,	5,766,	10,701,	6,010,
" **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	9,717,	12,036,	11,348,	13,037,	12,769,	13,221,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	175,	19,	146,	—	154,	18,
Total—Foreign Countries	289,446,	173,049,	291,089,	194,374,	276,357,	200,423,
II.—British Possessions:						
British India, Ceylon, and Singapore	37,478,	27,927,	37,738,	24,568,	40,697,	21,934,
Austral. Cols.—N. So. W., Vict., and Queensld.	11,758,	12,185,	10,280,	11,808,	10,381,	10,063,
" " So. Aus., W. Aus., Tasm., and N. Zealand	6,761,	6,886,	6,942,	5,830,	5,628,	4,062,
British North America	11,772,	9,413,	11,555,	8,629,	9,086,	10,234,
" W. Indies with Btsh. Guiana & Honduras	6,406,	4,303,	6,711,	3,510,	6,629,	3,490,
Cape and Natal	4,291,	3,428,	4,138,	4,838,	3,720,	3,701,
Brt. W. Co. of Af., Ascension and St. Helena	608,	383,	479,	727,	492,	786,
Mauritius	1,042,	546,	1,298,	582,	1,555,	561,
Channel Islands	663,	816,	560,	707,	625,	707,
Total—British Possessions	80,779,	66,387,	79,701,	60,699,	78,813,	55,538,
General Total £	370,225,	239,436,	370,790,	255,073,	355,170,	255,961,

* *i.e.*, British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—Whole Years, 1874-73-72-71-70.—*Declared Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Whole Years.) FOREIGN ARTICLES IMPORTED.	[000's omitted.]	1874.	1873.	1872.	1871.	1870.
		£	£	£	£	£
RAW MATLS.—*Textile*, &c.	Cotton Wool	50,937,	54,887,	53,617,	55,567,	53,398,
	Wool (Sheep's)..	22,640,	20,699,	19,862,	19,565,	16,101,
	Silk*..................	15,713,	15,519,	14,501,	16,065,	22,954,
	Flax	5,545,	5,295,	4,998,	5,791,	5,979,
	Hemp	2,211,	2,319,	6,266,	6,480,	4,424,
	Indigo	2,153,	2,438,	2,479,	907,	2,721,
		99,199,	101,157,	101,723,	104,575,	105,577,
" " *Various.*	Hides	6,815,	6,673,	6,733,	5,001,	4,584,
	Oils	4,778,	5,556,	4,649,	5,093,	4,259,
	Metals	11,109,	10,991,	9,207,	9,463,	5,370,
	Tallow	2,318,	3,133,	2,835,	3,112,	3,292,
	Timber..............	21,831,	19,665,	15,753,	12,081,	11,722,
		46,851,	45,018,	37,177,	34,749,	29,227,
" " *Agrcltl.*	Guano	1,342,	2,112,	1,183,	1,994,	3,477,
	Seeds	7,470,	7,129,	7,278,	8,106,	4,016,
		8,812,	9,241,	8,461,	10,100,	7,493,
TROPICAL, &c., PRODUCE.	Tea	11,573,	11,539,	12,982,	11,658,	10,095,
	Coffee	7,103,	7,319,	5,295,	5,407,	4,943,
	Sugar & Molasses	16,083,	21,436,	18,490,	18,572,	17,549,
	Tobacco	3,875,	4,003,	2,801,	3,705,	2,153,
	Rice	3,622,	3,238,	3,474,	2,321,	2,156,
	Fruits	3,349,	3,051,	3,916,	3,247,	2,157,
	Wines	6,868,	8,304,	7,722,	7,070,	4,817,
	Spirits	2,612,	3,297,	2,192,	2,896,	3,109,
		55,085,	62,188,	56,872,	54,876,	46,979,
FOOD	Grain and Meal.	50,753,	51,521,	50,987,	42,404,	34,197,
	Provisions	25,868,	23,812,	18,912,	18,219,	15,856,
		76,621,	75,333,	69,899,	60,623,	50,053,
Remainder of Enumerated Articles		45,594,	42,144,	44,283,	36,956,	16,687,
TOTAL ENUMERATED IMPORTS		332,162,	335,081,	318,415,	302,879,	256,016,
Add for UNENUMERATED IMPORTS (say)		36,273,	35,300,	34,960,	24,955,	64,004,
TOTAL IMPORTS		368,435,	370,381,	353,375,	327,834,	320,020,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**Whole Years,** 1874-73-72-71-70. — *Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(Whole Years.) [000's omitted.] British Produce, &c., Exported.		1874.	1873.	1872.	1871.	1870.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	59,716,	61,447,	63,419,	57,636,	56,727,
	„ Yarn	14,516,	15,876,	16,710,	15,055,	14,683,
	Woollen Manufactures	22,795,	25,279,	32,384,	27,185,	21,651,
	„ Yarn	5,559,	5,404,	6,110,	6,102,	5,176,
	Silk Manufactures........	2,100,	1,876,	2,189,	2,054,	2,441,
	„ Yarn	1,030,	1,668,	1,895,	1,270,	160,
	Linen Manufactures	7,124,	7,295,	8,248,	7,521,	7,378,
	„ Yarn	1,721,	1,976,	2,142,	2,220,	2,234,
		114,561,	120,821,	133,097,	119,043,	110,450,
„ *Sewed.*	Apparel	3,197,	3,434,	3,095,	2,699,	2,204,
	Haberdy. and Mllnry.	6,131,	6,598,	6,629,	5,920,	4,814,
		9,328,	10,032,	9,724,	8,619,	7,018,
Metals, &c.	Hardware	4,413,	4,938,	5,089,	4,022,	4,513,
	Machinery	9,771,	9,994,	8,199,	5,942,	5,287,
	Iron	31,225,	37,780,	36,061,	26,149,	21,081,
	Copper and Brass........	3,814,	3,821,	3,626,	3,268,	3,062,
	Lead and Tin	1,648,	1,548,	1,760,	1,623,	4,288,
	Coals and Culm	11,954,	13,206,	10,444,	6,267,	5,507,
		62,825,	71,287,	65,179,	47,271,	43,738,
Ceramic Manufcts.	Earthenware and Glass	3,152,	3,408,	3,113,	2,610,	2,524,
Indigenous Mnfrs. and Products.	Beer and Ale................	2,451,	2,420,	2,085,	1,871,	1,878,
	Butter	256,	266,	307,	328,	316,
	Cheese	82,	81,	83,	96,	110,
	Candles	187,	221,	223,	181,	116,
	Salt..................................	663,	789,	529,	468,	381,
	Spirits	152,	212,	224,	201,	179,
	Soda	2,602,	2,931,	—	1,753,	1,486,
		6,393,	6,920,	3,451,	4,898,	4,466,
Various Manufcts.	Books, Printed	899,	913,	883,	723,	630,
	Furniture	—	—	—	—	222,
	Leather Manufactures	3,547,	3,417,	3,664,	3,662,	2,622,
	Soap	277,	241,	304,	236,	219,
	Plate and Watches	285,	278,	232,	192,	552,
	Stationery	688,	673,	661,	532,	488,
		5,696,	5,522,	5,744,	5,345,	4,733,
Remainder of Enumerated Articles		20,321,	19,433,	19,855,	18,149,	15,534,
Unenumerated Articles..............................		17,160,	17,650,	15,798,	13,384,	11,178,
	Total Exports....................	239,436,	255,073,	255,961,	219,319,	199,641,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* **Twelve Months** *ended December*, 1874-73-72.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1874.		1873.		1872.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	1,484,327	868,530	1,225,967	714,998	1,021,383	651,606
Russia { Southern „	286,789	157,402	374,773	140,386	623,290	194,238
Sweden	1,224,649	633,327	1,139,312	564,527	1,092,202	518,847
Norway	793,745	378,868	868,147	328,641	792,772	305,209
Denmark	157,159	567,215	156,698	513,887	188,956	504,100
Germany	1,548,523	2,250,688	1,639,472	2,112,711	1,607,559	2,406,432
Holland	860,646	998,532	842,800	1,103,986	834,549	1,098,925
Belgium	820,085	865,604	822,867	939,261	786,158	789,585
France	1,704,388	2,438,363	1,639,472	2,552,079	1,700,139	2,382,874
Spain	751,430	526,838	921,501	544,143	840,718	570,023
Portugal	271,685	299,272	319,094	301,604	260,926	258,275
Italy	226,713	809,919	224,569	719,402	246,243	765,170
Austrian territories	28,933	93,021	25,980	103,213	40,832	154,222
Greece	120,133	79,295	108,831	76,652	110,131	61,549
Turkey (including Wallachia and Moldavia)	253,817	337,797	317,516	317,350	262,504	369,756
Egypt	255,266	527,758	370,547	519,300	424,698	539,151
United States of America	3,510,184	2,102,736	3,017,868	2,340,100	2,478,666	2,363,793
Mexico, Foreign West Indies, and Central America	294,291	441,245	315,350	435,483	311,212	432,038
Brazil	213,386	517,697	229,349	490,793	247,720	423,092
Peru	218,510	119,481	273,525	163,004	151,784	270,742
Chili	96,679	289,922	85,045	247,567	96,775	249,459
China	102,999	22,243	119,529	19,512	132,895	48,285
Other countries	477,487	647,487	525,558	592,741	486,337	556,080
Total, Foreign Countries	15,701,784	15,973,242	15,562,770	15,841,340	14,738,449	15,913,451
BRITISH POSSESSIONS.						
North American Colonies	1,500,419	706,450	1,326,235	603,274	1,291,136	738,801
East Indies, including Ceylon, Singapore, and Mauritius	985,093	1,374,761	983,968	1,175,067	1,018,948	1,090,105
Australia and New Zealand	246,069	568,603	267,292	467,582	225,716	390,495
West Indies	203,399	133,500	211,682	162,060	210,505	167,174
Channel Islands	233,005	158,541	236,513	161,651	239,463	179,739
Other possessions	212,304	835,363	203,503	731,693	181,723	768,587
Total, British Possessions	3,380,289	3,777,218	3,229,193	3,301,327	3,167,491	3,334,901
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Twelve months ended December { 1874........	17,905,940	19,248,352	—	—	—	—
Twelve months ended December { '73........	—	—	19,082,073	19,750,460	—	—
Twelve months ended December { '72........	—	—	—	—	18,791,963	19,142,667

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* **Whole Years, 1874-73-72.**

[000's omitted.]

(Whole Years.)	1874.		1873.		1872.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	6,721,	21,	9,444,	27,	5,983,	31,
So. Amca. and W. Indies	2,864,	3,996,	3,123,	3,058,	818,	2,800,
United States and Cal.	4,509,	3,477,	3,174,	5,992,	8,148,	4,618,
	14,194,	7,494,	15,741,	9,077,	14,944,	7,449,
France	740,	1,172,	1,509,	1,342,	2,124,	923,
Germany, Holl. & Belg.	282,	2,771,	253,	527,	772,	2,517,
Prtgl., Spain, and Gbrltr.	80,	76,	138,	71,	68,	60,
Mlta., Trky., and Egypt	274,	27,	2,160,	34,	103,	54,
China	283,	372,	129,	500,	—	62,
West Coast of Africa	136,	41,	78,	7,	109,	7,
All other Countries	808,	1,685,	454,	1,435,	217,	95,
Totals Imported	16,797,	13,638,	20,462,	12,993,	18,337,	11,167,
Exported to:—						
France	4,849,	1,322,	632,	3,564,	1,040,	871,
Germany, Holl. & Belg.	1,137,	964,	7,696,	1,479,	8,560,	1,773,
Prtgl., Spain, and Gbrltr.	944,	1,894,	3,243,	488,	1,674,	1,188,
	6,930,	4,180,	11,571,	5,531,	11,274,	3,832,
Ind. and China (viâ Egypt)	911,	6,683,	1,178,	2,795,	1,006,	5,678,
Danish West Indies	—	—	—	—	—	—
United States	9,	25,	2,417,	2,	—	—
South Africa	11,	21,	217,	45,	1,390,	111,
Mauritius	—	—	—	—	—	—
Brazil	501,	—	410,	—	397,	—
All other Countries	811,	354,	3,278,	1,455,	5,682,	966,
Totals Exported	9,173,	11,263,	19,071,	9,828,	19,749,	10,587,
Excess of *Imports*	7,624,	2,375,	1,391,	3,165,	—	580,
„ Exports	—	—	—	—	1,412,	—

REVENUE.—(UNITED KINGDOM.)—31ST DECEMBER, 1874-73-72-71.

Net Produce in QUARTERS *and* YEARS *ended* 31*st* DEC., 1874-73-72-71.

[000's omitted.]

QUARTERS, ended 31st Dec.	1874.	1873.	1874.		Corresponding Quarters	
			Less.	More.	1872.	1871.
	£	£	£	£	£	£
Customs	5,360,	5,579,	219.	—	5,739,	5,614,
Excise	7,077,	6,862,	—	215,	6,409,	5,804,
Stamps	2,603,	2,666,	3,	—	2,549,	2,438,
Taxes	48,	24,	—	24,	26,	36,
Post Office	1,470,	1,240,	—	230,	1,180,	1,158,
Telegraph Service	300,	291,	—	—	260,	160,
	16,858,	16,602,	222,	469,	16,163,	15,210,
Property Tax	251,	271,	20,	—	373,	539,
	17,109,	16,873,	242,	469,	16,536,	15,749,
Crown Lands	136,	135,	—	1,	120,	116,
Miscellaneous	1,059,	757,	—	302,	825,	989,
Totals	18,304,	17,765,	242,	772,	17,481,	16,854,
			NET INCR. £530.			

YEARS, ended 31st Dec.	1874.	1873.	1874.		Corresponding Years.	
			Less.	More.	1872.	1871.
	£	£	£	£	£	£
Customs	19,393,	20,740,	1,347,	—	20,751,	20,236,
Excise	27,368,	26,562,	—	806,	25,324,	23,238,
Stamps	10,458,	10,472,	14,	—	9,872,	9,644,
Taxes	2,438,	2,357,	—	81,	2,359,	2,338,
Post Office	5,750,	5,532,	—	218,	4,860,	4,690,
Telegraph Service	1,259,	1,131,	—	119,	905,	685,
	66,666,	66,794,	1,361,	1,324,	64,071,	60,831,
Property Tax	5,466,	6,831,	1,365,	—	9,636,	6,688
	72,132,	73,625,	2,726,	1,324,	73,707,	67,519,
Crown Lands	381,	390,	9,	—	375,	385,
Miscellaneous	3,992,	3,698,	—	294,	3,607,	4,305,
Totals	76,505,	77,713,	2,735,	1,618,	77,689,	72,209,
			NET DECR. £1,117.			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST DEC., 1874:—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 31*st December*, 1874; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 31*st of December*, 1874, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		18,304,611
Amount raised on Account of Fortifications, per Act 32 and 33 Vict., cap. 76		200,000
Amount received in Repayment of Advances for Public Works, &c.		498,912
" for Greenwich Hospital		27,800
Total		£19,031,323
Excess of the sums charged on the Consolidated Fund on the 31st December, 1874, payable in March quarter, 1875, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£5,927,978	
Surplus over Charge in Ireland	690,716	
Net deficiency		*5,237,262
		24,268,585

Paid:—

		£
Net Deficiency of the Balance in the Exchequer to meet the Charge on the 30th of September, 1874, as per last Account	£3,003,154	
Less—Amount of Sinking Fund applied in Repayment of Advances to meet the said Deficiency	463,043	
		2,540,111
Amount applied out of the Income to *Supply Services*		11,360,119
" advanced for Greenwich Hospital		27,800
Charge of the *Consolidated Fund* on the 31st of December, 1874, viz.:—		
Interest of the Permanent Debt	£6,059,505	
Terminable Annuities	2,250,796	
Principal of Exchequer Bills	105,700	
Interest of Exchequer Bills	42,847	
Interest of Deficiency Advances	2,555	
The Civil List	101,351	
Other Charges on Consolidated Fund (including 200,000*l.* for Fortifications)	504,607	
Advances for Public Works, &c.	984,918	
Sinking Fund	288,776	
		10,340.555
Total		£24,268,585

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* Charge on 31st December, 1874 (as above)	£10,340,555
Paid out of Growing Produce in December quarter, 1874	1,478,389
Portion of the Charge payable in March quarter, 1875	8,862,166
To meet which there was in the Exchequer on the 31st of December, 1874	3,624,904
Net Deficiency as above	5,237,262

BRITISH CORN.—*Gazette Average Prices* (England and Wales), *Fourth Quarter of* 1874.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1874.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
October 3	46	1	42	4	27	4
„ 10	44	8	42	7	27	11
„ 17	43	10	42	8	27	2
„ 24	44	1	42	10	27	9
„ 31	44	1	42	11	27	11
Average for October	44	6	42	8	27	7
November 7	44	5	42	8	27	11
„ 14	43	9	42	7	28	6
„ 21	43	5	42	6	27	11
„ 28	43	6	42	10	27	11
Average for November	43	9	42	7	28	–
December 5	44	8	43	8	28	7
„ 12	44	10	44	3	28	10
„ 19	45	1	44	7	29	8
„ 26	44	8	44	5	29	4
Average for December	44	9	44	2	29	1
Average for the quarter	44	4	43	1	28	2
„ year	55	9	44	11	28	11

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* Fourth Quarter (*October—December*) *of* 1874.

[0,000's omitted.]

1	2	3	4	5	6	7	
Issue Department.					Collateral Columns.		
Liabilities.		Assets.					
Notes Issued.	Dates. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.	
£ Mlns.	1874.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1874.	Per cnt.
37,00	Oct. 7	11,02	3,98	22,00	27,60	Oct.	3
36,39	„ 14	11,02	3,98	21,39	27,66	15 „	4
35,72	„ 21	11,02	3,98	20,72	27,03		
35,59	„ 28	11,02	3,98	20,59	26,74		
35,43	Nov. 4	11,02	3,98	20,43	27,27		
35,14	„ 11	11,02	3,98	20,14	26,79		
34,46	„ 18	11,02	3,98	19,46	26,38	16 Nov.	5
32,32	„ 25	11,02	3,98	19,32	23,83	30 „	6
34,21	Dec. 2	11,02	3,98	19,21	26,31		
34,52	„ 9	11,02	3,98	19,52	25,69		
35,10	„ 16	11,02	3,98	20,10	25,45		
35,33	„ 23	11,02	3,98	20,33	25,82		
35,78	„ 30	11,02	3,98	20,78	26,14		

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.		(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1874.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,07	4,25	22,38	,41	Oct. 7	15,34	19,29	9,40	,64	44,66
14,55	3,10	3,96	21,95	,40	„ 14	15,34	19,21	8,73	,68	43,96
14,55	3,11	3,56	21,92	,41	„ 21	14,74	19,39	8,69	,73	43,55
14,55	3,11	3,62	21,09	,38	„ 28	14,04	19,11	8,85	,75	42,75
14,55	3,10	3,74	19,59	,42	Nov. 4	14,04	18,53	8,16	,67	41,40
14,55	3,11	3,40	19,32	,39	„ 11	13,54	18,19	8,35	,69	40,77
14,55	3,10	3,83	18,04	,36	„ 18	13,53	17,54	8,08	,74	39,90
14,55	3,11	4,48	17,83	,32	„ 25	13,53	17,46	8,49	,81	40,28
14,55	3,06	4,70	17,77	,34	Dec. 2	12,88	18,91	7,90	,74	40,43
14,55	3,07	5,54	15,83	,35	„ 9	12,88	16,83	8,83	,80	39,34
14,55	3,08	5,83	16,69	,31	„ 16	12,88	17,21	9,65	,73	40,47
14,55	3,08	6,59	16,22	,31	„ 23	12,88	17,67	9,51	,70	40,76
14,55	3,09	7,81	18,69	,27	„ 30	12,90	21,16	9,64	,71	44,41

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND *and* WALES *on Saturday in each Week during the* FOURTH QUARTER *(October —December) of* 1874*; and in* SCOTLAND *and* IRELAND*, at the Four Dates, as under.*

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,93).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,66).	Weeks ended	£5 and upwards	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards	Under £5.	TOTAL. (Fixed Issues, 6,35).
1874.	£	£	£	£	1874.	£	£	£	£	£	£
Oct. 3	129,07	2,68	2,39	5,07	Oct. 3	1,96	3,94	5,90	3,78	3,01	6,74
" 10	115,54	2,78	2,45	5,23							
" 17	103,10	2,79	2,48	5,27							
" 24	136,10	2,75	2,41	5,15							
" 31	834,28	2,72	2,37	5,09	" 31	2,06	3,98	6,04	4,14	3,42	7,56
Nov. 7	134,46	2,70	2,41	5,11							
" 14	920,70	2,67	2,40	5,07							
" 21	132,67	2,65	2,36	5,01							
" 28	887,52	2,62	2,33	4,95	Nov. 28	2,40	4,31	6,71	4,05	3,45	7,50
Dec. 5	135,62	2,57	2,32	4,89							
" 12	103,83	2,73	2,28	4,81							
" 19	122,83	2,52	2,27	4,79							
" 26	102,71	2,52	2,29	4,81	Dec. 26	2,12	4,09	6,21	3,77	3,38	7,15

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* LONDON *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* LONDON.

1	2	3	4	5	6	7	8	9
				Calcutta.				
DATES.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	India Council.* 60 d. s.	At Calcutta on London. 6 m. d.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1874.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
Oct. 3	25·50	20·74	4·85	22	22⅜	—	—	57⅝
" 17	25·50	20·72	4·84½	22	22⅜	—	—	57 11/16
Nov. 7	25·47½	20·72	4·85	22¼	22⅛	50¼	¼ dis.	57¾
" 21	25·47½	20·78	4·85½	22⅜	22 1/16	50⅜	—	58
Dec. 5	25·50	20·82	4·85⅛	22⅛	22 1/16	50⅛	—	57¾
" 19	25·50	20·81	4·85½	20	20¾	50⅜	—	57½

* Bankers' drafts.

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The Economist (weekly).
Die Bevölkerung der Erde (Belun und Wagner).

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Vol. XXXVIII.] [Part II.

JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1875.

MARRIAGES *between* FIRST COUSINS *in* ENGLAND *and their* EFFECTS.

By GEORGE H. DARWIN, M.A., *Fellow of Trinity College, Cambridge.*

[Read before the Statistical Society, March 16th, 1875.]

CONTENTS:

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		III.—Literature on the Subject	174

I.—*The Proportion of First Cousin Marriages to all Marriages.*

It is well known that when the Census Act, 1871, was passing through the House of Commons, an attempt was made by Sir J. Lubbock, Dr. Playfair, and others, to have a question inserted with respect to the prevalence of cousin marriages, under the idea that when we were in possession of such statistics we should be able to arrive at a satisfactory conclusion as to whether these marriages are, as has been suspected, deleterious to the bodily and mental constitution of the offspring. It is unfortunately equally well known that the proposal was rejected, amidst the scornful laughter of the House, on the ground that the idle curiosity of philosophers was not to be satisfied.

It was urged, that when we had these statistics it would be possible to discover by inquiries in asylums, whether the percentage of the offspring of consanguineous marriages amongst the diseased was greater than that in the healthy population, and thus to settle the question as to the injuriousness of such marriages. The difficulty of this subsequent part of the inquiry was, I fear, much underrated by those who advocated the introduction of these questions into the census. It may possibly have been right to reject the proposal on the ground that every additional question diminishes the trustworthiness of the answers to the rest, but in any case the tone taken by many members of the House shows how little they are permeated with the idea of the importance of inheritance to the human race.

In the summer of 1873 the idea occurred to me that it might be, in some measure, possible to fill up this hiatus in our national statistics. In looking through the marriages announced in the "Pall Mall Gazette," I noticed one between persons of the same surname; now, as the number of surnames in England is very large, it occurred to me that the number of such marriages would afford a clue to the number of first cousin marriages.

In order to estimate what proportion of such marriages should be attributed to mere chance, I obtained the "Registrar-General's "Annual Report" for 1853, where the frequency of the various surnames is given. I here find the following table, p. xviii. :—

Number of Persons whose Names were Registered.	Number of Different Surnames occurring in the Whole Register.	Number of Different Surnames to every 100 Persons, *i.e.*, $\frac{275,405}{100} \times 11{\cdot}9 = 32,818$.	Number of Persons to One Surname, *i.e.*, $8{\cdot}4 \times 32,818 = 275,405$.
275,405	32,818	11·9	8·4

The fifty commonest names embraced 18 per cent of all the population. It appears that one in 73 is a Smith, one in 76 a Jones, one in 115 a Williams, one in 148 a Taylor, one in 162 a Davies, one in 174 a Brown, and the last in the list is one Griffiths in 529. Now it is clear that in one marriage in 73 one of the parties will be a Smith, and if there were no cause which tended to make persons of the same surname marry, there would be one in 73^2 or 5,329 marriages, in which both parties were Smiths. Therefore the probability of a Smith-Smith marriage, *due to mere chance*, is $\frac{1}{5329}$; similarly the chance of a Jones-Jones, a Davies-Davies and a Griffiths-Griffiths marriage would be $\frac{1}{76^2}$, $\frac{1}{162^2}$ and $\frac{1}{529^2}$, respectively. And the sum of fifty such fractions would give the probability of a *chance* marriage, between persons of the same surname, who owned one of these fifty commonest names. The sum of these fifty fractions I find to be 0·0009207, or 0·9207 per thousand. It might however be urged, that if we were to take more than fifty of the common names, this proportion would be found to be much increased. I therefore drew a horizontal straight line, and at equal distances along it I erected ordinates proportional to $\frac{1}{73^2}$, $\frac{1}{76^2}$, $\ldots \frac{1}{529^2}$. As I found that the names decreased in value very gradually, I, as a fact, omitted every other name; but had I taken every name the result would have been sensibly the same. The upper ends of these twenty-five ordinates were found to lie in a curve of great regularity, remarkably like a rectangular hyperbola, of which my horizontal straight line was one asymptote; and the ordinate corresponding to Griffiths was exceedingly short. Observing the great regularity of the curve, I continued it beyond the fiftieth surname by eye, until it sensibly coincided with the asymptote, at a point about where the hundred and twenty-fifth name would have stood, and then cut out the whole (drawn on thick paper), and weighed the part corresponding to the fifty surnames, and the conjectural part. The conjectural addition was found to weigh rather more than one-tenth of the other part (*i. e.* $\frac{124}{920}$); and as the chance of same-name marriages is proportional to the areas cut out, I think I may venture confidently to assert, that in England and Wales, about one marriage in a thousand takes place in which the parties are of the same surname, and have been uninfluenced by any relationship between them bringing them together. Now, it will appear presently that far more than one marriage in a thousand is between persons of the same surname; and, as I do not profess to have attained results of an accuracy comparable to 0·1 per cent., I am entitled to say that same-name marriages, when they take place, are due to the consanguinity of the parties. If it permitted such accuracy, the method pursued would however include a compensation for this disturbing cause.

With the help of an assistant the marriages announced in the "Pall Mall Gazette" in the years 1869-72, and part of 1873, were counted, and were found to be 18,528. Out of these 232 were between persons of the same surname, that is 1·25 per cent. were same-name marriages. The same marriage is occasionally announced twice over, but as there can be no reason to suppose that this course has been pursued oftener or seldomer with same-name marriages than with others, the result will not be vitiated thereby. In order to utilize this result, it now became necessary to determine—

(1). What proportion of this 1·25 per cent. were marriages between first cousins.

(2). What proportion marriages between first cousins of the same surname, bear to those between first cousins of different surnames.

If these two points could be discovered, the percentage of first-cousin marriages *in the upper classes* could be at once determined. I have endeavoured to find out these proportions in several ways.

An assistant was employed to count the marriages of the *men* in the pedigrees of the English and Irish families occupying about 700 pages of "Burke's Landed Gentry," marking every case where the marriage was "same-name." I then tried in every such case to discover, from a consideration of the pedigree, whether the marriage had been between first cousins. I found that in a certain number of cases I was unable to discover this. The total number of pedigrees in the 700 pages was about 1,300; and of these I had to exclude 71, thinking that by only including family trees where I could discover the relationship of the parties, I should not obtain an unfair selection of the whole. The marriages of the men alone were included, because, had I included those of the women, many marriages would have been counted twice over,—once in the pedigree under consideration, and again in that of the husband. In this way, then, I found that out of 9,549 marriages given by Burke 72 were same-name first cousin marriages, and 72 were same-name marriages not between first cousins. This gives the percentage of same-name marriages as 1·5 (not strikingly different from the 1·25 deduced from the "Pall Mall Gazette"), and of this percentage 0·75 is to be attributed to first cousin marriages.

I further collected in the same way 1,989 marriages from the "English and Irish Peerage," and of these 18 were same-name first-cousin marriages, or 0·91 per cent. The number of same-name marriages not being first cousin marriages was not however compared in this case. It will be observed, that the proportion is nearly 0·2 per cent. higher than with the "Landed Gentry," and as the nobility are known to marry much *inter se*, this was perhaps to be expected; however, 2,000 is too small a number on which to base a conclusion on this head with safety. The Peerage and Burke combined give 90 out of 11,538, or 0·78 per cent., of same-name first cousin marriages.

The next step was to send out a very large number of circulars (about 800) to members of the upper middle and upper classes, in which I requested each person to give me the names of any members of the following classes, who married their first cousins; viz., (1) the uncles, aunts, father and mother of the person; (2) the brothers, sisters and the person himself; (3) the first cousins of the person. I further asked for the names of any persons in the above classes, who contracted same-name marriages *not* with first cousins. I confined my questions to near relations, because, had the more distant ones been included, a risk was run of getting a selected set of marriages,—a risk which I am inclined to suspect was not avoided, as will hereafter appear.

In about 300 of the circulars I further asked for the total number of marriages contracted by the persons included in the Classes 1, 2 and 3. Care was taken to exclude, as far as possible, those persons who had cousins in common, so that each answer should embrace a fresh field. I must here return my thanks to the many persons who so kindly filled in and returned the circulars.

The following result was obtained:—

TABLE A.

Same-Name First Cousin Marriages.	Different-Name First Cousin Marriages.	Same Name *not* First Cousin Marriages.
66	182	29

From 181 circulars returned, in which the total number of marriages in each class was given, the following was the result:—

TABLE B.

Total Number of Marriages.	Total Number of First Cousin Marriages.	Percentage of First Cousin Marriages.	Percentage of Same-Name Marriages, whether Cousin or not Cousin.
3,663	125	3·41	1·38*

* Compare this with 1·25 deduced from "Pall Mall Gazette."

Persons having no cousin marriages to fill in were asked to return the circular blank, in those cases where the total number of marriages was not asked for. Of such blank returns, together with those where the total number of marriages was not given, 207 came back to me. From Table (B) it will be seen that $\frac{3,663}{181}$, or 20·2 marriages were recorded in each return; to judge, therefore, of the congruity of the 207 blank returns with the others, I impute to each of these 207 circulars, 20 marriages, and therefore add 4,140 marriages to the 3,663; as a grand total, with this conjectural addition, the following is the result:—

TABLE C.

Total Number of Marriages.	Total Number of First Cousin Marriages.	Percentage of First Cousin Marriages.
7,803	248	3·18

It is thus seen that the 207 returns are tolerably congruent with the 181 returns in Table (B); for 3·18 differs but slightly from 3·41.

From Table (A) it is seen that there were 182 different-name cousin marriages to 66 same-name cousin marriages; *i.e.*, for every same-name cousin marriage there were $2\frac{3}{4}$ different-name cousin marriages.

And again, there were 66 same-name cousin marriages to 29 same-name-not-cousin marriages; that is rather more than two to one. This last result disagrees so much with that obtained from Burke and the Peerage, where the proportion was, as above stated, found to be as 1 to 1, that I am inclined to suspect that I had either a run of luck against me, or more probably that a considerable number of marriages between persons of the same surname, not being first cousins, escaped the notice of my correspondents. This latter belief is somewhat confirmed by what follows. If, however, I combine the results obtained from Burke with those from my circulars, I obtain the following:—

$$\frac{\text{Same-name cousin marriages}}{\text{All same-name marriages}} = \frac{142}{249} = \cdot 57.$$

And in default of anything more satisfactory I am compelled to accept this result as the first of my two requisite factors.

As to the second factor, the proportion $2\frac{3}{4} : 1$ for different-name cousin marriages to same-name cousin marriages is, I fear, also unsatisfactory. But before entering on this point I will indicate the sources of error in my returns:—

(1). The sensitiveness of persons in answering the question in cases where there are cousin marriages, particularly when any ill results may have accrued.

(2). The non-return by persons who had no such marriages to fill in, and who would say, "I have no information, what is the use "of returning this?"*

(3). The ignorance of persons of the marriages of their relations. This ignorance would be more likely to affect the returns of different-name marriages than of same-name ones. I feel convinced that this has operated to some extent, as will be seen hereafter.

(4). In the cases of same-name marriages, persons would be more likely to know of the marriages between first cousins, than of other such marriages. The discrepancy between Burke and my circulars leads me to believe that this too has operated.

I have been much surprised to find how very little people know of the marriages of their relations, even so close as those comprised in my three classes. As it is clear that the marriages contracted by a man's uncles and aunts and by his brothers and sisters, would be less likely to escape his notice than would those contracted by his first cousins, I made an analysis of my circulars, including only the first two classes, viz.: (1) uncles, aunts, father and mother; (2) brothers and sisters and the person himself, with the following result:—

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* The circulars were ready stamped for return, which would induce many to return them by saving trouble.

TABLE D.

Same-Name, First Cousin Marriages.	Different-Name, First Cousin Marriages.	Same-Name, *not* First Cousin Marriages.
42	121	21.

And from the returns where the total number of marriages were required, the following is the result:—

TABLE E.

Total Number of Marriages.	Total Number of First Cousin Marriages.	Percentage of First Cousin Marriages.
1,929	81	4·2

It appears then, that

$$\frac{\text{Same-name cousin marriages}}{\text{Different name cousin marriages}} = \frac{1}{3} \text{ nearly,}$$

and

$$\frac{\text{Same-name cousin marriages}}{\text{All same-name marriages}} = \frac{2}{3}.$$

And these results I take to be more trustworthy than those given above, but I think that even here many different-name first cousin marriages and same-name-not-cousin marriages have escaped notice, and that the indirect method, to which I now proceed, is on the whole more reliable.

It is possible to discover the proportion between the same-name and different-name marriages in an entirely different way, and this I have tried to do. A man's first cousins may be divided into four groups, viz.: the children of (*a*) his father's brothers, (*b*) of his father's sisters, (*c*) his mother's brothers, (*d*) his mother's sisters. Of these four groups only (*a*) will in general bear the same surname as the person himself. On the average, the number of marriageable daughters in each family of each of the four groups will be the same. Were the four groups then equally numerous, we might expect that the same-name would bear to the different-name marriages the proportion of one to three. Since however a man cannot marry his sisters, this cannot hold good; for the classes (*a*) and (*d*) are clearly on the average smaller than (*b*) and (*c*), and the proportion we wish to discover is $\frac{(a)}{(b)+(c)+(d)}$, which must evidently be less than $\frac{1}{3}$. To take a numerical example: A's father is one of 3 brothers, who married and have children, and A's father had 2 sisters, who married and have children: A's mother had 1 brother, who married and has children, and was one of 5 sisters, who married and have children. Then clearly the class

(*a*) consists of 2 families.
(*b*) ,, 2 ,,
(*c*) ,, 1 family.
(*d*) ,, 4 families.

So that the above fraction becomes $\frac{2}{2+1+4}=\frac{2}{7}$. In this case we may conclude that if A marries a first cousin, it is 5 to 2 that he will marry one of a different surname. In another case the numbers might have been different, and therefore the fraction and the betting also different. And what we wish to discover is the *average* value of this fraction. But, for the various members of a large community, there will be a very large number of such fractions, and some will occur more frequently than others; so that in finding this average value, each fraction should have its proper weight assigned to it. In order to assign the weight to,—say the above fraction $\frac{2}{7}$, we must take a thousand families and find in how many of them there were 3 sons and 2 daughters who married and had children, and in how many there were 1 son and 5 daughters who married and had children. Having sufficiently indicated how the required proportion may depend on probabilities, I may state that I sent out a number of circulars to members of the upper middle, and upper classes, and obtained and classified statistics with respect to 283 families. The following table gives the results, excepting that I have supposed that I had collected 1,000 families, that is, the numbers given in the table are the actual numbers multiplied by $\frac{1{,}000}{283}$.

N.B. (*a*, *b*) *means a family in which there are* (*a*) *sons who married and had children; and* (*b*) *daughters who married and had children. Only such families are included as have, so to speak, done marrying.*

—	0,1	0,2	0,3	0,4	0,5	0,6	—
	82	39	21	7	0	4	
1,0	1,1	1,2	1,3	1,4	1,5	1,6	—
92	117	99	29	14	7	0	
2,0	2,1	2,2	2,3	2,4	2,5	2,6	—
64	78	43	46	11	14	0	
3,0	3,1	3,2	3,3	3,4	3,5	3,6	3,7
39	32	32	14	4	7	0	4
4,0	4,1	4,2	4,3	4,4	4,5	4,6	—
7	28	14	4	7	11	0	
5,0	5,1	5,2	5,3	5,4	5,5	5,6	—
0	0	14	0	4	0	0	
6,0	6,1	6,2	6,3	6,4	6,5	6,6	—
0	7	0	0	0	4	0	

As the number (283) of families collected is so small, the proportions of the rarer order of families will be of course incorrect, thus there are no families of the form (0, 5), whilst there are four of the form (3, 7). Any small error in these rarer orders of families will have but an infinitesimal effect on my results. I treated the question in four different ways. It might be supposed that a man, who had five families of first cousins in relation to himself, would be five times as likely to marry a first cousin, as a man who had only one such family, or again it might be supposed that he would be only equally likely. The truth, however, will certainly lie between these suppositions. The question, when treated from this point of view, leads to the result that $\frac{\text{same-name cousin marriages}}{\text{different-name cousin marriages}}$ is greater than $\frac{1}{4{\cdot}44}$ and less than $\frac{1}{4{\cdot}12}$. So that the true proportion would be about $\frac{1}{4\frac{1}{4}}$.

The two other methods are founded on the same grouping of families, and depend on the fact that my class (*a*) will on the average be equal in number to class (*d*); and class (*b*) to class (*c*), and all that is necessary is to find what value should be assigned to the ratio (*a*) or (*d*) : (*b*) or (*c*). It would be tedious to indicate the precise method employed, but suffice it to say, that after a correction for the greater prevalence of the second marriages of men than of women, the result comes out that $\frac{\text{same-name cousin marriages}}{\text{different-name cousin marriages}}$ is greater than $\frac{1}{4{\cdot}23}$ and less than $\frac{1}{4{\cdot}14}$, so that the proportion would be really about $\frac{1}{4\frac{1}{6}}$; a result which differs but very slightly from that given by the two other methods.

The amount of arithmetical labour was so great that I was obliged in the first two methods to rank all families of a higher order than (3,3) as (3,3), or a family (5,1) as being the same as a family of the form (3,1); in the two latter methods I was able to go as high as (4,4). These higher order of families are of very rare occurrence, and thus the reduction to all families to those of lower orders, would not materially affect the results, but as far as it goes it would make the above fractions too small.

I think on the whole it may be asserted, that the same-name first-cousin marriages are to the different-name first-cousin marriages as 1 to 4. It may perhaps be worth mentioning that a second grouping of families from "Burke's Landed Gentry" led to almost identical results, notwithstanding the bias introduced by the fact that the eldest sons have a constant premium on marriage.

It appears to me on the whole that this latter result is considerably more reliable than that from my circulars, and this as before stated, I can only explain on the supposition that many different-name marriages have escaped notice. The whole is very perplexing, and may perhaps be held to make all my results valueless. My final result for the two required factors then is, that—

$$\frac{\text{Same-name first-cousin marriages}}{\text{All same-name marriages}} = {\cdot}57$$

and

$$\frac{\text{Same-name first-cousin marriages}}{\text{Different-name first-cousin marriages}} = \frac{1}{4}.$$

If this be applied to the percentage 1·25 of the "Pall Mall Gazette," we get 3·54 or $3\frac{1}{2}$ per cent. as the proportion of first cousin marriages to all marriages in the middle classes. If it be applied to the peerage we get $4\frac{1}{2}$ per cent., and for the landed gentry $3\frac{3}{4}$ per cent., and for both combined $3\frac{9}{10}$ per cent.—To sum up, the direct statistical method gives from $3\frac{1}{5}$ to $3\frac{3}{5}$ per cent., or including only the classes (1) and (2), comprising uncles, aunts, brothers, and sisters $4\frac{1}{5}$ per cent.; the indirect method $3\frac{1}{2}$ per cent.; and the partly indirect and partly statistical, founded on the peerage and Burke, gives $3\frac{9}{10}$. There is, however, some reason to suppose that the proportion is really higher amongst the landed classes. There is a serious discrepancy between the direct and indirect method as to the proportion of same-name and different-name marriages, which goes far to invalidate the results.

Whether, however, these proportions are actually correct or not, there can be little doubt, that if the area taken is large enough, the percentage of first cousin marriages in any class is proportional to the per centage of same-name marriages; so that if the latter is, say only half the former, the cousin marriages are also only half. I therefore obtained from the General Registry of Marriages at Somerset House a return of the proportion of same-name marriages in 1872 in various districts, namely (1) London, (2) large towns, viz., Bradford, Leeds, Manchester, Portsmouth, Southampton, Exeter, Plymouth, Birmingham, Witney, Banbury, Northampton, Wellingborough, Peterborough, Bedford, and (3) Agricultural districts of Hampshire, Devonshire, Middlesex, Herts, Bucks, Oxon, Northampton, Huntingdon, Bedford, and Cambridge, &c. I must take this opportunity of returning my warm thanks to the superintendent of the statistical department, Dr. Farr, for the very great kindness both he and Mr. N. A. Humphreys of the General Registry Office, have shown in helping me in this inquiry by every way in their power. The following tables, in which the third column is introduced for the sake of comparison with the statistics from the "Pall Mall Gazette," give the results:—

	Number of Marriages Registered.	Per Cent. of Same-name Marriages.	Ratio to the Number (1·25) from "Pall Mall Gazette."	Percentage of First Cousin Marriages as deduced by previous Method.
1. London metropolitan districts	33,155	0·55	½	1½
2. Urban districts	22,346	0·71	$\frac{7}{12}$	2
3. Rural "	13,391	0·79	⅔	2¼

The numbers in most of the towns and counties, taken individually, were too small to give any trustworthy results.

It thus appears that in London, comprising all classes, the cousin marriages are about half what they are in the upper middle class, that is probably 1½ per cent. In urban districts they are about $\frac{7}{12}$ths of what they are in the upper middle classes, that is, probably 2 per cent. In rural districts they are about two-thirds of what they are in the upper middle classes, that is, probably 2¼ per cent. In the middle and upper middle class or in the landed gentry probably 3½ per cent. In the aristocracy probably 4½ per cent. This is in accordance with what might have been expected *à priori:* for the aristocracy hold together very much, the landed gentry slightly less, the business class again less. And beginning from the other end, London is an enormous community, recruited from every part of England; the large towns form communities, only one degree less heterogeneous; and the country is still less heterogeneous. I am, however, somewhat surprised at finding the proportion in the rural districts so small, for one would imagine that agricultural labourers would hold together very closely.*

Persons accustomed to deal with statistics will be able to judge better than myself, what degree of reliance is to be placed on the previous results. My own *impression* is that there is not an error of 1 per cent. in asserting that amongst the aristocracy the proportion of first-cousin marriages to all marriages is 4½ per cent., and that for the upper middle classes, and the urban and rural districts, the error in the percentages is somewhat less, and lastly for London decidedly less. But this is an impression that I hardly know how to justify, and I therefore leave an ample field for adverse criticism.

II.—*Inquiries in Asylums.*

I now pass on to the second part of my inquiry, namely, the endeavour to discover, by collecting statistics in asylums, whether first cousin marriages are injurious or not.

The method I intended to pursue was as follows: to get the superintendents of asylums to ask each one of the patients under their charge, either personally or through their subordinates, the question, "Were your father and mother first cousins or not?" In the case of the insane, I thought, in my ignorance, that those who

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* I may mention that Mr. Clement Wedgwood made very careful inquiries for me concerning 149 marriages of skilled artisans in the potteries, and did not find a single case of first cousin marriage, and only three where there was any kind of relationship between the husband and wife. He was further assured that such marriages never take place amongst them. It may be worth giving the following table of consanguineous marriages out of "Italia Economica nel 1873," kindly sent to me by Dr. Farr.

Consanguineous Marriages Contracted in Italy from 1868-70 *inclusive.*

Marriages.	1868-70.	Per Annum.	Per 100.	Percentage to all Marriages.
Between brothers-in-law and sisters-in-law............	2,392	797	33·27	0·413
Uncles and nieces	292	97	4·05	0·050
Aunts and nephews................	50	17	0·70	0·009
Cousins	4,455	1,485	61·98	0·769
Total	7,189	2,396	100·0	1·24

It must be borne in mind that in Roman Catholic countries, a dispensation is requisite to permit the marriage of cousins.

had charge of them would have so intimate a knowledge of the character of each individual case, as to be able to sift those whose answers could be depended on, from those who were quite untrustworthy. In this it appears that I was mistaken, as will be shown by the remarks sent me by the various gentlemen who so kindly took up this inquiry. I cannot help thinking, however, that they undervalue the statistics which they have collected for me. I must take this opportunity to return my warm thanks to all the gentlemen mentioned below for the immense pains they have been at in collecting these results. I could hardly have believed that so many men, much occupied by their business, could have shown a stranger so much kindness, more especially as many of them seemed convinced that their labours were almost in vain. To Dr. W. Lauder Lindsay, Dr. Crichton Browne, Dr. Maudsley, and Dr. Scott, I must return my especial thanks for the really extraordinary vigour with which they took up the subject, and gave me every help in their power.

The following tables give the results collected from lunatic and idiot asylums in England and Wales, Scotland and Ireland. Besides the results tabulated below, Dr. Wilkie Burman, of the Wilts County Asylum, Devizes, informed that he could collect no statistics worth giving; Dr. Bacon, of the Fulbourn Asylum, Cambridge, whilst kindly offering to persevere, expressed his conviction of the uselessness of the attempt; Dr. Shuttleworth, of the Royal Albert Asylum, Lancaster, estimated that, out of 200 patients, 5 per cent. were the offspring of first cousins; and Dr. Clouston, of the Royal Edinburgh Asylum, tells me that, out of 750 patients, two *said* that they were offspring of first cousin marriages, but most could not answer. The table of results is as follows:—

English and Welsh Asylums.	Doctors.	Number of Patients.		Answers to "were Parents First Cousins?"	
		Males.	Females.	Males.	Females.
1. West Riding, Wakefield (lunatics and idiots)	Crichton Browne	700	707	337	318
2. Hanwell (lunatic)	Rayner	166	214	110	145
3. Warneford, Oxford (lunatic)	Byewater Ward	30	29	20	
4. Mickleover, Derby (lunatic)	Murray Lindsay	174	190	99	99
5. Metropolitan District, Caterham (lunatic)	Adam	877	1,038	434	126
6. Glamorgan County (lunatic)	Yellowlees............	254	238	102	116
7. Chester County (lunatic)	Lawrence	About 450		115	110
8. County Lunatic, Snenton, Nottingham	Phillimore............	184	206	97	103
9. Grove Hall, Bow	Mickle	427	—	181	—
10. Hatton, Warwick	Oscar Woods	537		258	
11. Earlswood, Surrey (idiot)	Grabham	—		1,388	
12. Broadmoor Criminal (lunatic)	Orange	370		150	
Totals for England and Wales	—	8,170 very nearly.		4,308	
SCOTCH ASYLUMS.					
1. Montrose (lunatic)	Howden	179	227	49	92
2. Crichton Royal Institution, Dumfries..........................	Gilchrist	87	59	31	20
3. Southern Counties, Dumfries..................................	Anderson	178	140	108	92
4. Murray Royal Institution, Perth	Lauder Lindsay	42	38	28	16
5. Perth District, Murthly	McIntosh	99	130	37	41
Totals	—	585	594	253	261
		1,179		514	
IRISH ASYLUMS.					
1. Maryborough	Through Dr. Courtenay	217		—	
2. Limerick District	Courtenay............	434		—	
Totals	—	651		—	

Untrustworthy, or unable to answer.		Offspring of First Cousins.		Observations.
Males.	Females.	Males.	Females.	
363	389	14	17	Examination conducted with great care; cases of doubt excluded. Almost all who gave answers were lunatic and not idiotic.
56	169	2 or 1	1	Only those are given as trustworthy where the history of the patient could be ascertained. Amongst the males there were twelve cases of doubtful consanguinity, but whether first cousins or not, is not stated.
39		0		Patients of the farmer and tradesmen class.
75	91	2	2	Dr. Lindsay thinks these statistics worth little.
433	912	8	12	Statistics very imperfect; trustworthiness of answers uncertain. The total number of patients is overstated by nine, but whether males or females I know not.
152	122	5	4	Statistics worth little. Of those who did not answer, 137 were ignorant, and 137 incapable.
about 225		1	2	Patients of the labouring class.
87	103	2 or 5	2 or 4	Statistics to be little depended on.
246	—	8	—	Patients old soldiers.
277		9 or 8		Patients, labourers and artisans. The offspring of first cousins belonged to seven families. Examination conducted with great care.
—		53		Facts derived from parents, and therefore tolerably trustworthy.
220		2		Dr. Orange places little reliance on these results.
about 3,860		149 or 142		Between 3·46 and 3·29 per cent. of the patients who answered said they were offspring of first cousin marriages.
130	135	2	6	Dr. Howden thinks the inquiry useless. No inquiry was made of the idiots in this asylum.
56	39	2	2	
70	48	4	4	
14	22	4	0	Dr. Lindsay thinks the results *very* doubtful. The failure to get answers was due to incapacity and refusal.
62	89	1	2	Patients paupers.
332	333	13	14	5·25 per cent. of the patients who answered said that they were offspring of first cousin marriages.
665		27		
—		2		Patients agricultural labourers.
—		3		Twenty patients of better class; the rest labourers.
—		5		No information as to numbers who failed to answer. Dr. C. considers these statistics of little value. Roman Catholics do not marry first cousins. 0·77 per cent. of *all* the patients say they are offspring of first cousin marriages.

The columns of observations show how very unsatisfactory the collectors consider these results. From various circumstances, it appears that the results from Earlswood, Hatton, and the West Riding Asylums are considerably more trustworthy than the others.

Including, then, only these three asylums, it appears that, out of 2,301 patients, 90 or 91 were offspring of first cousins, that is 3·9 per cent. The fact that this agrees pretty closely with the 3·4 per cent. deduced from the whole table, leads me to think that the trustworthiness of the results collected has been under-estimated by the collectors themselves.

At Hanwell, where also there were some circumstances leading one to believe in tolerable accuracy, the percentage is very small, and this agrees well with what I should have been led to expect, from the small percentage of cousin marriages I found in London, by the methods of the first part of this paper. It is to be observed, however, that there were twelve cases reported of doubtful *consanguinity*.

It will be seen that the percentage of offspring of first cousin marriages is so nearly that of such marriages in the general population, that one can only draw the negative conclusion that, as far as insanity and idiocy go, no evil *has been shown* to accrue from consanguineous marriages.

From the high percentage (5¼) of offspring of first cousin marriages in the Scotch asylums, I should be led to believe that such marriages are more frequent in Scotland than in England and Wales, and from the mountainous nature of the country this was perhaps to be expected.

The methods of the first part of this paper throw no light on the question as far as concerns Scotland.

From the two Irish asylums no results whatever can be deduced.

But whatever the value of these statistics may be, the opinion of prominent medical men, who have had especial advantages of observation, and are many of them also men of science, cannot be without interest.

Dr. Crichton Browne writes to me that the investigation was impossible in the case of idiots, except through the medium of the parents. "It has always seemed to me that the great danger " attending such marriages consists in the intensification of the " morbid constitutional tendencies, which they favour. Hereditary " diseases and cachexiæ are much more likely to be shared by " cousins than by persons who are in no way related . . . . (and " these) are transmitted with more than double intensity when they " are common to both parents. . . . They seem to be the square or " cube of the combined volume. . . . Even healthy temperaments, " when common to both parents, often come out as decided cachexiæ "in the children." He adds, that persons of similar temperaments ought not to intermarry. Elsewhere he tells me that he did not at first make sufficient allowance for the ignorance "and stupidity of "my patients." In such an investigation, congenital effects, he says, should be distinguished from the acquired. I fear, however, that I must leave this to some hands more skilful than mine.

Dr. Rayner, of Hanwell, says that amongst the fishermen of Whitstable there is much intermarriage. The results seem to show that the prevalent diathesis is developed, whether it be strumous, rheumatic, or otherwise. He says that it was very difficult to discover the facts from his patients.

Dr. Howden, of Montrose, says: "As regards insanity, my "own impression is, that unless there exists a hereditary predisposition the marriage of cousins has *no effect* in producing it. . . . . "Neither in insanity nor in any other abnormal propensity do two "plus two produce four; there is always another factor at work "neutralising intensification and bringing things back to the "normal." Dr. Howden thus disagrees with Dr. Crichton Browne, who, I take it, would maintain that, in insanity, two plus two make more, and not less than four.

Dr. Lauder Lindsay is of opinion that the ill effects of cousin marriage, including insanity, are much less than represented. He quotes "Stonehenge" (Mr. J. H. Walsh), "On the Dog" ("Field" newspaper, p. 188, 1859), to the effect that in-and-in breeding sometimes reduces dogs "to a state of idiocy and delicacy of constitution, "which has rendered them quite useless . . . full of excitability ". . . with a want of mental capacity." He also urges the "impossibility" of obtaining trustworthy answers from the patients themselves; and even the results of personal inquiries from the nearest relatives of the patients would be liable to much error. Several of my correspondents expressed a belief that consanguinity of parents was more potent in producing idiocy than insanity. The results from Earlswood do not seem, however, to confirm this, and here the results sent seemed peculiarly trustworthy.

I had intended to pursue my inquiries in hospitals and asylums for other diseases, but the attempt which I made with respect to deaf mutes has shown me that the difficulties which arise are so great, that it is almost useless to persevere in this course any further. I will now give the results which I have collected.

The first return relates to the College for the Blind at Worcester. The results were communicated through the kindness of the Rev. Robert Blair and Mr. S. S. Foster. The college is small, and only 20 cases are recorded, and particulars of each case were sent. Of these 20, the offspring of first cousins were one, and of second cousins a case of two brothers. Of the 20 cases, 2 were due to accidents. Thus, out of 17 families, there was one offspring of first cousins.

Dr. Scott, of Exeter, has informed me that out of 241 families, in which there were children born deaf and dumb, there were 7 cases of first cousin marriage. In three or four of these families there were more than one child so afflicted.

Dr. Scott also kindly offered to place me in communication with the superintendents of a number of institutions for the deaf and dumb, and having availed myself of his kindness, I have collected the following answers.

Mr. Arthur Hopper, of the Deaf and Dumb School near Birmingham, conducted an inquiry with the utmost care. He tells me that out of 122 pupils, he has received information about the parentage of all but 9. The 113 pupils, whose parentage is known, belonged to 109 families; of these 113, there were deaf from accident or disease 37, and of 10 the cause of deafness was unknown. Of these 10 pupils and the 66 congenitally deaf, not one was the offspring of a *consanguineous* marriage. Of the 37 who became deaf from disease, one was the offspring of first cousins. I am not informed whether the cases, where several were deaf in a family, belonged to the congenital cases, but it is almost certain to be so, and in any case I will assume (as the most unfavourable assumption) that it is so. Thus, out of 62 congenitally deaf families, not one was the offspring of even a consanguineous marriage. If we were to assume the 10 other cases to be cases of congenital deafness, it would be, not one in 72 congenitally deaf families was the offspring of a consanguineous marriage.

Mr. Patterson, of the Manchester School for Deaf Mutes, kindly informs me that his 130 pupils belonged to 123 families. Concerning 8 of these families no information could be obtained; in 67 such families the deaf-mutism resulted from disease; in 63 it was congenital; and only one family was the offspring of first cousins.

Mr. Neill, of the Northern Counties Institution, at Newcastle-on-Tyne, says, "350 have been admitted into this institution, and I "do not think more than 6 of the parents were cousins. In one "family whose parents were cousins there were 4 deaf mutes."

I have thus accurate information with respect to 366 families (*i.e.*, 241 + 62 + 63), and out of these 8 were offspring of first cousins; that is to say, nearly 2·2 per cent. were offspring of first cousins. And, including the 350 cases at Newcastle, the percentage is $\frac{1400}{716}$, or 1·9 per cent. It is curious to notice that I deduced $2\frac{1}{4}$ per cent. as the proportion of first cousin marriages in urban districts, other than London. Thus as far as these meagre results go, no evil in the direction of deaf-mutism would appear to arise from first cousin marriages. The failure to collect more statistics of this kind does not arise from any inability to get at the best sources of information; on the contrary, I have on all hands received the kindest assurances of willingness to help me.

Mr. David Buxton, of the Liverpool School, says the mode of investigation is simply impracticable; but he has sent me several pamphlets on the subject, his own excellent paper amongst the number.*

Mr. William Sleight, of the Brighton School, tells me that the children know nothing, and the parents are unwilling to communicate the fact inquired after, and says, "As far as I have been able "to ascertain, about 7 per cent. of born deaf children are the "offspring of parents who were cousins." (Query, first cousins?)

Mr. Patterson also writes to me that he is of opinion that, "though the result of the marriage of near relatives may not be "seen in the deafness of their immediate offspring, yet the result is "a deterioration of the constitution of the offspring, which may "show itself in deafness in a few generations."

Mr. Neill, who has been engaged in the tuition of the deaf and dumb for forty years, thinks the cases of offspring of cousins so afflicted are fewer than is supposed. He also gives me facts showing how strongly heritable congenital deafness is where both parents are deaf mutes; marriages are, moreover, by no means uncommon between pupils of these institutions.

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* Since my paper has been in print, Mr. Buxton has sent me additional statistics, and from these I make some extracts.

Mr. Buxton himself collected the following cases twenty years ago.

Twenty-six families, offspring of first-cousin marriages, gave 54 deaf-mutes, 1 deaf of one ear, 1 semi-mute, and 1 idiotic. 17 of these families contained 85 children, of whom 42 were afflicted and the remaining 43 sound.

In another family each of the parents had had families by previous marriages, but neither of these previous families were affected by deaf-mutism.

Mr. Buxton has also sent me a number of extracts from the reports of American Institutions for the Deaf and Dumb; they refer in general to consanguineous marriages, but the following refer to first-cousin marriages.

In Illinois, out of 893 children, 42 (or 4·7 per cent.) were offspring of first cousins.

Out of 36 children who entered the Pennsylvanian Institution in 1872, one was the offspring of first cousins.

Mr. Buxton also quotes a return made to the French Academy. A *résumé* of M. Boudin's paper is given in the "Comptes Rendus," Tom. liv, 1862. The statement is as follows:—

Two per cent. of all French marriages are consanguineous. Deaf-mute offspring of consanguineous marriages equal, at Lyons, 25 per cent. of the congenitally afflicted, at Paris 28 per cent., and at Bordeaux 30 per cent. "Taking the ordi-"dinary risk of deaf-mute offspring as 1, there are 18 such births from unions of "first cousins, 37 from those of uncles and nieces, and 70 from those of nephews "and aunts. Healthy parents, if related in blood, may have deaf-mute children, "while deaf and dumb parents not so related rarely have any."

The paper is given *in extenso* in the "Annales d'Hygiène Publique," tom. xviii pp. 5—82.

To sum up the results of the whole investigation: It seems probable that in England, among the aristocracy and gentry, about 4 per cent. of all marriages are between first cousins; in the country and smaller towns between 2 and 3 per cent.; and in London perhaps as few as 1½ per cent. Probably 3 per cent. is a superior limit for the whole population. Turning to lunatic and idiot asylums, probably between 3 and 4 per cent. of the patients are offspring of first cousins. Taking into account the uncertainty of my methods of finding the proportion of such marriages in the general population, the percentage of such offspring in asylums is not greater than that in the general population, to such an extent as to enable one to say positively, that the marriage of first cousins has any effect in the production of insanity or idiocy, although it might still be shown, by more accurate methods of research, that it is so. With respect to deaf-mutes, the proportion of offspring of first cousin marriages is precisely the same as the proportion of such marriages for the large towns and the country, and therefore there is no evidence whatever of any ill results accruing to the offspring in consequence of the cousinship of their parents.

III.—*Literature on the Subject.*

For the sake of any persons who may desire to make investigations in this subject at any future time, I will append a short sketch of what I know of the literature on the subject. I cannot, however, pretend to have studied previous writings at all deeply.

To the best of my belief, the most thorough investigation ever made is contained in some papers* "On Blood Relationship in "Marriage," by Dr. Arthur Mitchell, a Deputy Commissioner in Lunacy for Scotland.

In 1860, Dr. Mitchell collected the histories of 45 consanguineous marriages, and amongst these found 8 cases of no evil results, 8 cases of sterility, and 29 cases of evil resulting to the offspring. He feels sure, however, that these cases do not present the rule, but that they were really selected from their striking nature, although the observers had doubtless no intention of making any such selection; an equal number of marriages, where no kinship existed between the parties, might easily be collected, presenting a yet sadder picture. He observes that some families seem to have a tendency to cousin marriages, and I have noticed the same thing in my investigation. He points out that the most satisfactory mode of investigation appears to be—

1st. Take a large number of instances of any defect, and ascertain how many are the offspring of kinsmen; then compare the result with the proportion of cousin marriages to other marriages in the same community. This is, in fact, the method I have tried to pursue.

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* "Edinburgh Medical Journal," March, April, and June, 1865.

2nd. Take a locality and collect the family history of every marriage there, and compare results. Such an inquiry, if sufficiently wide to be accurate, is almost beyond the power of a private individual.

In applying the former of these methods, Dr. Mitchell states that certain Scotch counties have an aggregate population of 716,210; and that he investigated the cases of 711 idiots from these counties. Of 84 of these the parentage was unknown, and yet of the whole 711, 98, or 13·6 (query 13·8) per cent. were *shown* to be offspring of blood relations. Marriages of blood relations are notoriously not 13·6 per cent. of all marriages, but Dr. Mitchell thinks that it may be regarded as certain that such a ratio is about ten times the reality, or that the actual percentage of consanguineous marriages is about 1·3 per cent. I here venture to differ with him and I should not be greatly surprised if the marriages of *first* cousins alone in Scotland were as many as 4 per cent. Dr. Mitchell has elsewhere shown that illegitimacy tends to produce defective children; deducting, therefore, the illegitimate children (of whom, of course, the parentage was unknown) from the above 711 idiots, the percentage of the offspring of consanguineous marriages rises to 18·9 per cent.

The 98 cases of blood relations, whose offspring were idiots, were first cousins in 42 cases; second cousins in 35 cases; third cousins in 21 cases. It is probable, he says, that more second and third cousins marry than first cousins, so that these statistics show that the nearer the alliance the greater the danger.

Out of 177 insane persons from the counties of Ross and Wigtown, he found 23 per cent. were offspring of first, second, or third cousins; or, including those about whose parentage no information could be obtained, out of 260 patients 16 per cent. were such offspring.

The influence of these marriages, he says, in producing insanity is clear. It appears also that its influence is more felt in producing imbecility and idiocy, than in insanity acquired late in life. It does not, of course, follow that blood relationship of parents is the *cause* of mental weakness in the children.

A valuable collection of references will be found in this paper, and I have myself consulted some of the originals, but as I am unable to improve on Dr. Mitchell's abstract, I will only give the outline of what he says, and refer readers for more accurate details to the orignal sources.

In 1846, Dr. Howe showed that in Massachusetts, the parentage of 359 idiots, out of 574 cases, was ascertained, and that there were 17 cases certainly, and probably 3 more, of offspring of consanguineous marriages; that is, about 5 per cent.

Again the reports of the Commissioners on idiocy to the General Assembly of Connecticut showed that in 1856, out of 310 cases, consanguinity of parents was the probable cause of idiocy in 20 cases, or nearly 7 per cent. of the whole number. But Dr. Mitchell finds that the question as to consanguinity of parents was only answered in 160 cases, so that we ought to count the 20 cases as 12½ per cent. Of these 20 cases, 12 were the offspring of first cousins.

With respect to deaf-mutism, Mr. Buxton, of the Liverpool Institution for the Deaf and Dumb, in a paper in the "Medico-"chirurgical Journal" (January, 1859), says that he found one deaf mute in ten to be the offspring of first cousins.

Dr. Peet, of the New York Institution, gives the same proportion, and adds, that in that part of the United States hardly one family in fifty is the offspring of a cousin marriage.

Dr. Mitchell himself instituted an inquiry into institutions for deaf mutes, and found that in English institutions, out of pupils representing 323 families, 15 families were the offspring of consanguineous marriages; and that in Scotland the corresponding numbers were 181 and 9. Making a deduction of 25 per cent. for cases of acquired mutism, Dr. Mitchell finds that 1 case in 17 of congenital mutism is the offspring of a consanguineous marriage. The numbers, however, collected by me are larger than these, and show a very different result, unless indeed the marriage of more distant cousins is more fruitful of this evil than those of first cousins—a very unlikely result.

Dr. Peet says in his "Thirty-fifth Annual Report," in analysing Sir C. Wilde's "Status of Disease in Ireland,"* that it appears that in Ireland about 1 in 16 of deaf mutes were offspring of first, second, or third cousins.

From the Irish statistics, Dr. Mitchell deduces the result that deaf-mutism, as it appears among the children of cousins, seems to be more congenital than in marriages between persons not akin.

Dr. Mitchell carried out his second plan by collecting family histories, as complete as possible, of the whole populations in the islands of St. Kilda, Scalpay, the parish of Berneray in Lewis, and some small fishing villages on the south-east coast of Scotland. In all these places he had been led to suppose that cousin marriages were frequent. It should be mentioned that in every case the frequency was found less than was supposed, although it some-

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* "Blue Book," containing Report of the Census (for Ireland), 1864.

times rose as high as one marriage in four. These districts were chosen because the populations are much isolated. Very full details of the status of disease are given; but Dr. Mitchell was disappointed in the degree of accuracy to which he was able to attain. He sums up the general result of his second method as follows:—
" The facts which I have detailed appear to show a great unsteadi-
" ness in the character of this influence (consanguineous marriages).
" Sometimes we seem to find little or no proof that it is an evil
" influence. At other times this bloodship in the parentage appears
" to be the origin of much injury to the offspring. More frequently
" still the facts admit of various interpretations, and are not very
" clear or satisfactory in their teaching. It is of importance, how-
" ever, to know that these differences or seeming differences may
" occur, and to learn that it is necessary to widen the field of
" observation, and carefully to inquire into all those circumstances
" by which it is quite clear the results may be, and often are,
" exaggerated, modified, or concealed. . . . . If taken *as a*
" *whole* and fairly interpreted, it appears to me that they lead to
" the same conclusion as that drawn from the first line of inquiry,
" viz., that consanguinity in parentage tends to injure the offspring."

Dr. Mitchell came to the conclusion that, under favourable conditions of life, the apparent ill effects were frequently almost nil, whilst if the children were ill-fed, badly housed and clothed, the evil might become very marked. This is in striking accordance with some unpublished experiments of my father, Mr. Charles Darwin, on the in-and-in breeding of plants; for he has found that in-bred plants, when allowed enough space and good soil, frequently show little or no deterioration, whilst when placed in competition with another plant, they frequently perish or are much stunted.

The general conclusions, drawn from the whole investigation, may be shortly stated as follows:—

1st. Consanguinity of parents is injurious to the offspring.

2nd. Where the children seem to escape, the injury may show itself in the grandchildren.

3rd. In many isolated cases, and even groups of cases, no injurious result can be detected.

4th. These unions influence idiocy and imbecility more than the forms of insanity acquired later in life.

5th. The frequency of these unions in Scotland (although not so great as supposed) somewhat increases the amount of idiocy there.

All who are interested in the subject should certainly refer to the originals of these papers.

It will be observed that my investigation, so far as it is worth anything, tends to invalidate Dr. Mitchell's results; but perhaps the apparent invalidation is due to the fact, that a large majority of Englishmen live under what are on the whole very favourable circumstances.

The next paper to which I will refer is by Signore Paolo Mantegazza, Professor at Pavia, and is entitled "Studj sui "Matrimonj Consanguinei."* The Professor begins with an interesting historical sketch of the legislation against consanguineous marriages, which has obtained in the various ages of history. He says it would be useless to repeat all that has been written on the subject, and refers to the works of Chipault,† Reich,‡ his own work,§ and to Dr. Mitchell's paper above referred to. He gives a list of fifty-seven authors who have opposed these marriages, and of fifteen who have defended them, but says that we ought not to lay stress on the great inequality of these numbers He also gives a long list of experiments made on the in-breeding of animals.

He says that in 1863 an inquiry was made by the Government of France as to the proportion of consanguineous marriages, but that he failed to obtain (at least at that time) an inquiry of a like nature in Italy. The professor therefore gives the cases of 512 consanguineous marriages (inclusive of Mitchell's) from all countries collected by him; and of these he found 409 cases of bad results, and 103 with no ill results. It cannot, however, he observes, be asserted from this that it is 4 to 1 that the result of such a marriage will be ill. They are selected cases, for they naturally caught the attention of observers. Many of the evils recorded in the list are doubtless quite independent of consanguinity.

The only fact which can be safely deduced from these numbers is the effect in producing sterility; and he finds that 46, or 8·9 per cent., of the marriages were sterile.

The results, which he deduces from his consideration of the cases, may be shortly summed up as follows:—

1. Consanguineous marriages are, on the whole, more unfavourable to the offspring than others.
2. The proportion of 4 : 1, deduced from his table, is not a correct view of the case.
3. The injury arises from the multiplication of pathological germs of the same nature.
4. This influence alone would weaken the offspring of relations. This is confirmed by the frequency of sterility, and of miscarriages, and the appearance of diseases new to the family.

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* Milan, Gaetano Brigola, 1868, price 75 centimes.

† "Étude sur les mariages consanguins," Paris, 1863.

‡ "Geschichte, Natur," &c., Cassel, 1864.

§ "Elementi d'Igiene," Milan, 1868, p, 437.

5. The best proved results of these unions are, failure of conception, abortive conception and miscarriage, monstrosities, disposition to nervous complaints, arrested mental development, scrofulous and tubercular diathesis, lowered vitality, high rate of mortality, especially amongst infants, dysmenorrhœa, small generative power, pigmental retinitis.

6. The nearer the kinship, the greater the danger.

7. He gives the obvious conclusions as to choice in marriage.

8. It is tolerably probable that the danger is greater in cases of uterine kinship: first, because more evil or good is heritable from the mother; and secondly, because "we are entirely sons of our mother, but are not equally so, nor always, the sons of our father." This last sentence can hardly refer to conjugal infidelity; and yet, if it does not so, how does the second cause differ from the first?

Amongst the references given in this paper, is one to "a very "recent work" by Dr. Loubrieu on "Deaf-mutism," and others to Dr. Down's "Marriages of Consanguinity," &c. ("London Hospital "Report III," pp. 224 and 236), to Saint-Lager's "Études sur les "causes du Crétinisme," &c., Paris, 1867, and to "Studj sui sordo-"muti e rendiconto degli Istituti ecc," Milan, 1864.

I have to thank Mr. Buxton, of the Liverpool School for Deaf-mutes, for sending me a pamphlet by Mr. J. Scott Hutton.* At the Halifax (Canada) School Mr. J. Scott Hutton found that out of 54 families (with 100 children), with respect to which information could be obtained, 15 families (with 37 children) were offspring of first cousins. He sums up by saying:—"Thus out of 110 deaf-"mute children of whom we have definite information, 56 are the "offspring of cousins . . . . an expressive example of the melan-"choly consequences flowing from cousin-marriages." It should be added, that there are two apparent discrepancies between the figures given in this part of the paper. The statistics of other countries are not so striking. "In England, the deaf and dumb in "marriages within the limits of consanguinity are in the proportion "of 6 per cent., in France 25 to 30 per cent., in Kentucky 20 per "cent., in Illinois 12 per cent., and in Ontario 28 per cent. No authority is given for these figures, nor is the phrase "limit of consanguinity" defined.

Mr. Buxton's admirable paper on "Deaf-mutism" has been already referred to in the sketch of Dr. Mitchell's paper.

Sir W. Wilde in an Appendix to his "Aural Surgery," gives a very complete account of the history, and tuition of deaf-mutes, and the causes which produce the disease. He says consanguinity may be looked on as paramount. "Many conjectures have been offered

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* "American Annals of the Deaf and Dumb," January, 1869. Washington, D. C., pp. 15—17.

" on the subject, but the question has been set at rest by the results " of the Irish census." This appendix embodies the results of the inquiry carried out in the Irish census, and is referred to in Dr. Mitchell's papers.

So general a consent as to the ill effects of cousin-marriages must certainly have far greater weight than my purely negative results. But it strikes me that in no case has the investigation been free from flaws, for in no case has it been really determined, what is the proportion of consanguineous marriages in the whole population. The exceedingly various estimates which different people have given me of the frequency of cousin-marriages (from 10 per cent. down to 1 in 1,000, if my memory serves me right), leads me to believe that general impressions on this point are almost valueless. Every observer is biased by the frequency or rarity of such marriages amongst his immediate surroundings.

My paper is far from giving anything like a satisfactory solution of the question as to the effects of consanguineous marriages, but it does, I think, show that the assertion that this question has already been set at rest, cannot be substantiated.

The subject still demands attention, and I hope that my endeavour may lead more competent investigators to take it up from some other side.

Marriages between Cousins in Relation to Infertility and a High Death-rate amongst the Offspring.[*]

Professor Mantegazza states in his paper[†] that he may conclude with tolerable safety, from his collection of 512 cases of consanguineous marriage, that consanguinity tends to cause sterility; for he found that between 8 and 9 per cent. of the recorded marriages were sterile. It is not clear, however, how he is entitled to draw this conclusion, unless he knows what is the proportion of sterile marriages in the general population, and he admits that he has no statistics on this point. M. Boudin, who wrote at an earlier date, is of the same opinion, and considers, further, that even where sterility does not afflict the consanguineous marriage itself, it is apt to affect the offspring[‡]. Dr. Balley is also of opinion that the ill effects of such marriages are liable to appear in the second generation.[§]

Since reading my paper on " Cousin Marriages in England," on the 16th of March, before this Society, a method has occurred to me of settling these points pretty satisfactorily. This method is by a comparison between the fertility of the marriages of first cousins and of the marriages of their offspring, as recorded in the pedigrees in "Burke's Landed Gentry" and the "Peerage," with the fertility of marriages between persons not akin.

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[*] Sent in by Mr. Darwin subsequent to the reading of his paper.

[†] "Studj Sui Matrimonj Consanguinei." Milan, 1868.

[‡] "Annales d'Hygiène Publique," tom. xviii, pp. 5–82.

[§] "Comptes Rendus," tom. lvi, p. 135.

I had already got a large number of marriages marked as being between first cousins, and I accordingly proceeded to count the number of children arising therefrom. The marriages made within the twenty years immediately preceding the publication of those works were excluded; so that only complete families were counted. It soon became evident that the lists of the daughters were very incomplete, and that the daughters were perhaps sometimes omitted altogether; the sons dying in infancy are also frequently omitted (especially in the "Landed Gentry"); and when such occurred I excluded them. I think that the lists of the sons surviving infancy are however, pretty complete, and any incompleteness will clearly affect the record of marriages between persons not akin as much as it does the first cousin marriages. The comparison to be made must, therefore, be only between the numbers of sons. I shall use the words *sterile* or *infertile* to mean the absence of children surviving infancy. The number of daughters recorded will be given, so as to show the extent of incompleteness.

In this manner 116 families, offspring of first cousins, were collected. In all but 12 of them the marriages were between children of brothers. In 11 of the 116 it is merely stated that there was issue of the marriage, and in 8 others there is no information as to whether there was issue or not. I found in a subsequent inquiry, by cross references to other pedigrees, that where there was no information there was nevertheless often a family; so that the absence of information is no indication of sterility, and indeed is perhaps some slight indication of fertility, because the family is omitted in order to economise space, and d. s. p. (*decessit sine prole*) is frequently added where there *was* no issue. In this case, however, cross references were of no avail, because the family would be recorded in the pedigree under consideration or not at all. The absence of information is here then a slightly greater indication of sterility than in my later inquiry, where it is no indication at all.

The cases where issue was recorded may clearly be disregarded in making the comparison, since they might be matched by similar cases amongst the non-consanguineous marriages.

Subtracting, then, the 11 recorded cases of issue and the 8 cases of no information, we are left with 97 families; these gave 202 sons and 153 daughters. It is probable that about 212 daughters should have been recorded. Now 202 sons to 97 marriages is at the rate of 2·07 sons to each marriage; or, supposing the 8 cases of doubt to have been all sterile, we get 105 marriages as giving 202 sons, that is at the rate of 1·92 sons to each marriage.

Thus the average number of sons who survive infancy, arising from a marriage of first cousins amongst the gentry of England is between 1·92 and 2·07.

The next step was to collect the non-consanguineous marriages. In order to secure myself from bias, I opened my book by chance and counted all the marriages in the pedigree which fell under my eye. I then did the same in another place, and so on. In this way 217 families arising from persons not akin were collected, and found to give 416 sons and 340 daughters. Here, as before, the daughters are deficient, and about 437 daughters ought probably to have been given. Now 416 sons to 217 marriages is at the rate of 1·91 sons to each marriage. Thus the average number of sons who survive infancy, arising from non-consanguineous marriages, is 1·91.

The balance of fertility is therefore slightly on the side of the cousins, but the small difference is probably due to chance.

In order to feel greater confidence in this result, a second method of analysis was carried out. If cousin marriages tend to cause sterility, they probably tend to cause partial sterility. Now amongst the 97 cousin marriages, 14 were sterile (in the sense defined), and amongst the 217 non-consanguineous marriages 33 were sterile. Thus we have 83 fertile cousin marriages and 184 fertile non-consanguineous marriages; the former gave 202 sons, the latter 416 sons. It will be observed that this course entitles me to disregard the 8 cases of "no information" before referred to, for if they were sterile they are to be subtracted *ex hypothesi*, and if there was issue, they could be matched by similar cases amongst the non-consanguineous. Thus fertile first cousin marriages produce sons at the rate of 2·43 sons to each marriage, and fertile non-consanguineous marriages produce sons at the rate of 2·26 sons to each marriage.

Therefore the analysis leads to a similar slight balance in favour of the fertility of the first cousins, just as did the former one.

I offer the following suggestion as a possible explanation of the greater fertility of the cousins, although mere chance is the more probable cause of the difference. Marriages between first cousins will be more apt to take place where there is a large group of persons who bear that relationship to one another. In such families fertility will be hereditary; hence it is possible that the comparison is to some extent being effected between abnormally fertile families, and those in which fertility is only normal.

The next point to investigate is as to whether the offspring of first cousin marriages are themselves affected by sterility.

To test this, recourse was again had to the "Peerage" and "Landed Gentry," and 136 marriages of the offspring of first cousins were collected. Concerning 29 of these no information could be obtained, and, for the reasons before assigned, these may be set aside.

Of the 107 remaining marriages, it is recorded that 14 had issue. Subtracting these, we are left with 93 marriages, and these gave 180 sons and 157 daughters. It should be mentioned that some few of the marriages were recent, so that the families would be not quite complete in these cases. Now 93 marriages giving 180 sons is at the rate of 1·93 sons to each marriage.

Again, 16 of these marriages were sterile, so that 77 fertile marriages gave 180 sons, that is at the rate of 2·34 sons to each marriage. If these two numbers, viz., 1·93 and 2·34, be compared with the corresponding numbers, viz., 1·91 and 2·26, for the non-consanguineous marriages, it is clear that there is again no evidence of want of fertility in the offspring of first cousin marriages.

The results with respect to fertility may be summed up in the following table:—

Parentage.	Average Number of Sons to each Marriage.	Percentage of Sterile Marriages.*	Average Number of Sons to each Fertile Marriage.
Not consanguineous	1·91	15·9	2·26
Parents first cousins	between 2·07 and 1·92	between 14·7 and 20·9	2·43
One parent the offspring of a marriage between first cousins..............	1·93	17·2	2·34

* Sterility means absence of children surviving infancy.

The comparison may be best effected by means of the numbers in the last column. The figures in the second column are not of much value, since in some cases it was difficult to decide whether the entry should be made as being a case of "no information" or of sterility.

The comparison of the figures in the first and last columns show, without much room for doubt, that the alleged infertility of consanguineous marriages, whether direct or indirect, cannot be substantiated.

I now pass on to the question of the youthful death-rate.

It has been stated by M. Boudin and others that the offspring of consanguineous marriages suffer from an excessively high rate of infant mortality. I have tried to put this to the proof as follows:—

I recurred to the families in the "Peerage" which were offspring of first cousins, and marked every case where it is recorded that a son or daughter died in infancy or youth. Where the age of the child was mentioned, ten years was taken as the standard of youth. "Burke's Landed Gentry" was of no avail in this inquiry, because I found that children dying in infancy were never, or very rarely, mentioned therein.

From the "Peerage" I could only obtain 37 fertile first cousin marriages; in two of these there were no children surviving youth. The 37 gave 86 sons, who survived infancy, 15 children (boys and girls) who died in infancy or youth, and 4 more as to whom the period of death was doubtful. Besides this, it is stated of one family, that "all died young except one daughter." Now in the previous part of this paper it is shown that the average number of sons to a fertile first cousin marriage is nearly 2½; so that it may not be unreasonable to credit this family with 4 infants who died.

On this supposition we should have 37 fertile marriages of first cousins giving 86 sons, who survived, and between 23 and 19 boys and girls, who died early. Reducing these numbers to percentages, I find that—

One hundred fertile marriages of first cousins would give from 51 to 62 children who die young, and that for every 100 sons, offspring of first cousins, who survive youth, there are from 22 to 27 boys and girls (their brothers and sisters) who die early.

These numbers cannot be used as giving the actual infant death rate, on account of the imperfections in the pedigrees in the "Peerage," but they may be used in a comparison with other statistics deduced from the same source.

Now 89 fertile non-consanguineous marriages (collected by chance from the "Peerage") gave 197 sons, and 44 sons and daughters who died young. Reducing these numbers to percentages as before, I find—

That 100 fertile non-consanguineous marriages would give 49 children who die young, and that for every 100 sons, offspring of fertile non-consanguineous marriages, who survive infancy, there are 22 boys and girls (then brothers or sisters) who die early.

The numbers to be compared are therefore 51 or 62 with 49, and 22 or 27 with 22.

These are merely two different ways of consulting the facts, and it appears that both methods give some evidence of a slightly lowered vitality amongst the offspring of first cousins.

Thirty-seven cases form, however, far too small a total on which to base satisfactory statistics. The numbers thus collected are far scantier than those collected by others, but as far as I am aware this is the only occasion in which the method of collection has been one in which the unconscious bias of the collector could not operate. In all these inquiries I was ignorant as to whither the figures were tending until I came to add up the totals.

This last inquiry is, I fear, worth but little, but so far as it goes it tends to invalidate the alleged excessively high death-rate amongst the offspring of cousins, whilst there remains a shade of evidence that the death-rate is higher than amongst the families of non-consanguineous marriages.

DISCUSSION *on* MR. DARWIN'S PAPER.*

THE PRESIDENT said that the paper was obviously of that order which had to be very carefully studied and considered before it could be properly discussed; but still there might be some gentlemen present who would like to offer some observations on the subject. He then called upon Dr. Farr who, he said, had acted as a referee in this matter, to express his opinions on the subject.

Dr. FARR said he was sure that those present would agree with him that the Society were indebted to Mr. Darwin for taking up a subject the importance of which could not be questioned. He had paid a good deal of attention to the reading of the paper and to the important results that had ensued from the inquiries made by the author. It must, he thought, have required great courage on the part of Mr. Darwin to undertake a subject so difficult. At first sight, the question of the marriage of cousins appeared very easy, but when the subject came to be dealt with it, would be found very difficult. He had had occasion to go over "Blackstone" for a particular purpose. He (Blackstone) started of course with the assumption that each person had two parents, and he worked up by degrees until he arrived at the twentieth degree, proving that each person has a million ancestors, and that up to the fortieth degree they had a million million ancestors. It was pretty evident, he thought, that Blackstone had fallen into an error there, and that he had overlooked the fact that cousins intermarried, which would narrow the stream considerably. He (Dr. Farr) was quite puzzled in following Mr. Darwin in his analysis of cousins. That was one source of difficulty. If the number of persons who married their first cousins in England could be ascertained, with the ages at which they married, the number of children they had, and the state of health of these children, more important results would, he thought, be arrived at. He trusted that Mr. Darwin's paper would lead some of the Fellows of the Society to see the importance of the subject and be the means of pressing an investigation of the real effect of cousin marriages on the proper authorities. It was somewhat anomalous that a man should be prevented from marrying his deceased wife's sister, and yet allowed to marry his cousin. In Italy aunts were allowed to marry their nephews, and among the Jews marriages of that kind were allowed. It would be interesting to know the effects of intermarrying, but what he would specially like to ascertain was the effect of marriages at different ages. There had been some inquiries on that subject by Dr. Duncan and others. It was found, for instance, that women, if they produced children at all, produced them every twenty months. He merely mentioned this to show what an important inquiry Mr. Darwin had opened by his paper.

Mr. CORNELIUS WALFORD said he had the honour of assisting Mr. Darwin in collecting statistics in this matter, but he found a great deal of difficulty in getting returns from persons who, he thought, would be able to give them. In reference to this subject he had read, some twenty-five years ago, "The Constitution of Man;" by George Combe—a man who was very much preached against, but who gave some very vital information on the subject, and was strongly opposed to cousin marriages. He thought Mr. Darwin would have alluded to the Society of Friends, as that Society, some years ago, had taken this subject into consideration; and one of their reasons for allowing marriages outside the Society was that they found that marriages with cousins within the Society were very detrimental. The author could have found also a great deal of information by reference to Jewish families. He thought, however, the inquiry instituted by Mr. Darwin had a good deal more in it than at first sight appeared, and he hoped it would be the beginning of a series of inquiries that would throw some light on the subject. Some years ago, Mr. Fox read a paper before the Society, which would give Mr. Darwin and other members of the Society some useful information on the matter.

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* The discussion refers exclusively to Mr. Darwin's original paper.

Mr. H. T. HUMPHREYS (of the "Morning Post") said that as a member of the Society of Friends, he wished to correct the remark made by the last speaker with reference to that body. Although they had to some extent opened their gates, they had always had a rule against first-cousin marriages.

Mr. GALTON thought that Mr. Darwin was somewhat too modest as to the results of his investigation, as he had undoubtedly swept away, to some extent, an exaggerated opinion which was current as to the evil resulting from first-cousin marriages. He thought, however, there might be some error on the part of the author in dealing with the "Pall Mall," results due to the particular class of advertisers in that paper, which, if rectified, would bring the result more in harmony with the others. In reference to the remarks of previous speakers as to intermarrying among the Quakers and the Jews, he instanced the sect of the Samaritans, who were visited by Mr. George Grove in his travels a few years ago. He found only eighty men, all of whom had a magnificent bodily presence, and were apparently free from any local disease. He (Mr. Grove) saw no reason why that race should not continue for a length of time, unless the falling off were due to their practice of fasting on particular days, during which the infants which were being suckled might be deprived of sufficient nourishment. There was, however, as a matter of fact, a good deal of mortality among them. There were many other similar cases to be found. In the southern valleys of the Alps, where there were small communities and the natives intermarried, there was a remarkably fine class of men.

Mr. KENNELLY said he was among the Samaritans in 1865 and 1866. He found there were then 162 men and women, all more or less in very good health; and he believed that, to a great extent, they intermarried. There were, however, signs of falling off, and it was only a matter of time that they would cease to be a people upon the earth. So that there must be among that race some agency at work other than intermarrying.

FRIENDLY SOCIETIES *and* SIMILAR INSTITUTIONS.

By E. W. BRABROOK, F.S.A., F.S.S., &c.

[Read before the Statistical Society, 20th April, 1875.]

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I SHOULD not have ventured to ask the attention of the Statistical Society to this subject if I had not formed the impression that it is one of which people in general do not realise the importance and the extent. Attention has been of late awakened to it by the elaborate and valuable reports of Her Majesty's Friendly Societies' Commissioners, and by the discussions on the Bill now before Parliament. But, unless the subject is statistically treated, a notion is not formed of the real extent of its bearings, and of the number of people whose welfare is more or less involved in it. I have little to say that may not be ascertained by study of the reports of the commissioners, and of the annual reports issued by the Registrars of Friendly Societies; but as these are very voluminous, it may be of use to boil them down. The ascertaining of facts is of the utmost service in settling the principles on which legislation should proceed, and in this respect I hope my paper may have some value.

The general principle, which the facts I shall lay before you tend to establish, is that it is desirable that every society coming within the classes mentioned in this paper should be known to and recognised by the law. For this purpose it appears to me:—

1. That registration should not be compulsory, if that can be avoided, but that the conditions of the law should be such as to induce every society to come under it, and registration thus be universal.

2. That the law should be comprehensive first, and eclectic afterwards.

3. That the general provisions of the law should be made applicable to societies rather with regard to the form of their organisation than to its purpose.

I may remark that these principles are, I think, at the basis of the Friendly Societies' Bill now before Parliament, though they were much more thoroughly carried out in the Bill when first introduced by Sir Stafford Northcote in 1874. Several valuable features of that Bill had to be withdrawn on account of what I cannot help thinking the mistaken opposition of some of the societies interested.

The modern history of the relation of the legislature to friendly societies commences with Sir George Rose's Act of 1793; but, centuries before that date, guilds and friendly societies had obtained the advantages of registration by means of the canon law. My friend, Mr. Tyssen, discovered some years ago in the records of the Commissary Court of the Bishop of London the rules of the societies of Glovers, Blacksmiths, Clothworkers, and Waterbearers of London. These range in date from 1354 to 1496, and three of the societies still exist as wealthy London companies; that of the Waterbearers having ceased to be when Sir Hugh Myddelton's New River rendered their services unnecessary.* Each of these sets of rules bears the certificate of the commissary, "ratifying, establishing, authorising, and confirming" them; and the object for which this certificate was given was to enable the society to sue in the ecclesiastical court for quarterage and penalties:—the ecclesiastical courts having claimed for themselves a jurisdiction in civil causes, by a suit, *pro læsione fidei*, in which they enforced by canonical censure a decree to perform a promise.

The common law, however, did not long tolerate these ecclesiastical encroachments on its own domain, and the changes of centuries, altering the social condition of the people, gave rise to the modern friendly society. Sir George Rose's Act of 1793, recognised the existence of numerous "Societies of good fellowship," for raising by voluntary subscriptions funds for the mutual relief and maintenance of the members in sickness, old age, and infirmity.

For such societies the Act provided encouragement in various ways, as well as relief from taxation to an extent which, in those days, must have been of great pecuniary value, and exemption from removal under the poor law. The benefits offered by this statute were readily accepted by the societies, and the vast number of societies which speedily became enrolled shows that Sir George Rose's Act met a real public want. In the county of Middlesex alone nearly a thousand societies were enrolled within a very few years after the passing of the Act, and the number in some other counties was almost as great.

The societies then formed were nearly all of a like kind: small clubs, in which the feature of good fellowship was in the ascendant, and that of provident assurance for sickness and death merely accessory. This is indicated by one provision, which we find in nearly all of their rules, viz., that the number of members shall be limited to 61, 81, or 101, or as the case may be.

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* "Transactions of London and Middlesex Archæological Society," vol. iv.

The odd one, which occurs in all these numbers, stands, I suppose, to represent the president or the secretary, or it may be that it is a contrivance to prevent a tie on a division. Several of these old societies are still in existence, and can point to a prosperous career extending over, in some cases, more than one hundred years; a prosperity based rather upon good luck than scientific calculation. Founded among small tradesmen or persons in the way to thrive, the claims for sickness were only made in cases where the sickness was accompanied by distress, and even the funeral allowance was not always demanded.

The numerous enrolments of societies which took place under Sir George Rose's Act were but the commencement of a steadily increasing and developing movement for the establishment of societies having purposes of a provident kind. Not merely has the friendly society proper developed into a great number of different forms, but other societies have grown out of it, and have called for separate legislation in the same spirit and direction. Thus, the savings banks in 1817, the loan societies in 1835, the benefit building societies in 1836, the co-operative societies in 1852, have been recognised by statutes based on the same principles as the Friendly Societies Acts. These principles have been applied from time to time with more or less of modification, but in substance have remained steadily the same from the passing of the Act of 1793 to the present time. It has become necessary to provide for affiliated orders, for county societies, for dividing societies, for annuity societies, for benevolent societies, for working men's clubs, and for a vast number of other varieties.

The commissioners divide the societies under the Friendly Societies Acts alone into seventeen classes; and those even do not exhaust all the varieties of society, independent of those which are established under the other Acts I have named. The first class named by the commissioners is that of the affiliated societies or "orders," and they worthily occupy the first place for their magnitude and for the interesting features they present. At the head stands the Manchester Unity of Odd Fellows, which now has over 6,000 lodges, and nearly half a million of members; and the Ancient Order of Foresters, which has now (31st December, 1874) 276 districts, 4,241 courts, and 468,495 members, besides 10,013 honorary members. The funds of the courts and districts of the Order of Foresters amount to 2,022,958*l.*; and the extent to which they confer benefit upon the members may be measured by the fact that relief was granted during the year 1874 on 3,197,366 days of sickness, and on 4,666 deaths. Their progress is marked by the fact that the increase during the year in the number of members was 22,178, and in the amount of funds 164,927*l.* There are also thirty-two other orders, numbering over 1,000 members each, and a vast number of smaller bodies having the same system of affiliation, making a grand total of membership which must now amount to nearly a million and a half in this class of society alone. These figures refer to the United Kingdom, but several of the larger societies have branches in British Colonies and elsewhere.*

The second class is "general societies," principally existing in London, of which the commissioners enumerate eight, with nearly 60,000 members, and funds amounting to about a quarter of a million; these societies are managed at a cost (on the average) of about ten per cent. of their income. The third class includes the "county societies," of which eleven are enumerated, ten of which had 221,955*l.* funds and 29,036 members, and thirty others approaching that type, and showing even a larger average of funds per member. Class 4 is "local town societies," which is a very numerous class, of which only a few selected specimens are noticed by the commissioners. Their proportion of funds to members is generally not so high as in the class of county societies; though one society, the "Chelmsford Provident," has 22,223*l.* funds for 2,405 members,† and one at Brighton has 35,646*l.* funds to only 1,221 members.‡ The Cannon Street Society, in Birmingham, has 58,580*l.* funds for 7,856 members,§ and another society in the same town, the "Birmingham General Provident," has 34,895*l.* funds to 4,940 members.||

In this group might be included a number of interesting societies which were not brought under the notice of the commissioners, but which have formed the subject of a lecture by my friend, Mr. Marcus N. Adler, viz., those established among the Jewish community. They differ from ordinary friendly societies partly in the nature of the benefits granted upon death, which are intended to

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* A report by the Government Statist of Victoria, Mr. H. H. Hayter (No. 98, 1874), gives particulars as to friendly societies in that colony for the year 1873; 790 societies and branches are stated to be in existence. The number of societies and branches furnishing returns had increased in nine years from 186 to 682; and the number of members from 12,465 to 50,318. The income of the societies for the year 1873 was 151,602*l.*, and their expenditure 132,765*l.*; their funds amounted to 261,629*l.*, of which more than one-fourth was invested at rates of interest exceeding 7½ per cent. Their experience of mortality was under 1 per cent., and of sickness under eleven days per member. One hundred and fifty-two societies are branches of the Independent Order of Rechabites, 150 of the Manchester Unity of Odd Fellows, 136 of the Ancient Order of Foresters, and 333 of other affiliated orders, the independent societies being only about 20 in number.

† Report of Registrar for 1873, p. 72.

‡ Ibid., p. 166.

§ Ibid., p. 169.

|| Ibid., p. 158.

compensate for loss of employment during the time of ceremonial seclusion enjoined by the Jewish law, which is called "sitting "shiva." They also provide for the mourners and priest, and a tombstone for the departed, and the same benefits as an ordinary friendly society during sickness. Some societies among this estimable community also provide a place of worship. I find on the Register the "Pursuers of Peace," enrolled in December, 1797; the "Bikhur Cholim; or, Visitors of the Sick," April, 1798; the "Hozier Holim," 1804; the "Righteous Path, No. 2," established in 1810, but not registered until 1860, in addition to many others, some of which have probably ceased to exist. Altogether, about fifty distinctively Jewish friendly societies can be traced on the Register for Middlesex, of which four are courts of the order of Foresters. Mr. Adler calculates that some thirty or forty are in existence in London.

One curious object for which two or three societies have been certified under the earlier Acts is the accumulating, by weekly subscriptions, a fund for the purchase of flour and the baking of the cakes required for use at the time of the Passover. I mention these not on account of their magnitude or importance, but as showing the great diversity of the operations of friendly societies, and the wide range of purposes over which they extend.

The fifth class enumerated by the commissioners is "local, "village, and country societies." This is still a very numerous class, since it includes the small public house clubs which abound in the villages and rural districts, but these feel much the competition of the branches of affiliated orders, which are gradually supplanting the local independent clubs, and which offer the same, or even greater, attraction in the shape of social gatherings.

The local village societies, in many cases, adopt the plan of annual or less frequent sharing of their funds, and a large proportion of them are unregistered, probably from mere jealousy of the interference of Government.

The sixth class, "particular trade societies," glides almost imperceptibly into the trade unions, which, however, are managed under a different Act of Parliament, to which I shall presently ask your attention, and are expressly exempted from the Friendly Societies Act.

The seventh class "dividing societies," contains a great number of bodies, which are in an anomalous position with regard to the law, as it does not recognise a custom of periodical division of the funds of a friendly society. These societies are, however, very attractive to the members, who desire merely to assure against temporary and casual sickness, and at the same time to have a little fund for themselves at the costly season of Christmas. The dividing societies are able, practically, to exact a higher contribution from their members than persons are willing to pay to an ordinary friendly society, in consequence of the prospect of the annual division. In the absence of fraud or deceit, they are certainly quite as much provident bodies as the regular accumulating friendly societies.

The commissioners' eighth class, deposit friendly societies, differ from ordinary friendly societies in having a fund accumulated by each member for his own use, from which a portion of his sick pay is to be drawn. These are not of importance either for their number or for the extent of their operations: but they serve to show the tendency provident institutions of various kinds have to combine; for they partake quite as much of the character of savings banks as of that of friendly societies proper.

Class 9, collecting societies and burial societies generally are subdivided into "local" and "general." Of the "local" class, the commissioners enumerate 239 societies, with over 680,000 members, and 203,777*l.* funds; besides about 150 societies which make no return. In twenty of the more important of the "general" societies, they estimate the number of members at 1,426,023, and the amount of funds at 461,605*l.*

These general collecting societies were the subject of much laborious investigation and close attention on the part of the commissioners, and their report upon this point contains matter of great interest. There is no doubt that these societies have to deal with a lower class of the community, both with respect to means and to intelligence, than that from which the members of ordinary friendly societies are drawn. It is clear, too, that the large emoluments gained by the officers and collectors, the high percentage of expenditure, and the excessive frequency of lapsing of insurances, point to mischiefs in their management. On the other hand, the very circumstance that these societies extend the benefits of life assurance to a class which the other societies cannot reach is sufficient to prove that, unless and until a substitute can be provided, their regulation and not their extinction ought to be aimed at. Upon this principle the Friendly Societies Bill proceeds, and for this purpose it contains some valuable provisions.

Class 10, "annuity societies," prevail in the west of England. Eight societies in Devon returned their funds on 31st December, 1873, at 197,566*l.*, and their members as 1,019; being less by 13,418*l.* and 70 members than the same eight societies returned in 1872. These societies are few, and their business is diminishing. Five such societies were dissolved in the year 1872. The purpose for which they were established is now better fulfilled by the National Debt Commissioners, with whom no local society can well compete. In Ireland, however, the commissioners report the existence of twelve annuity societies, with 832 members and 185,322*l.* funds.

Class 11, female societies, is a numerous one; though the registrar's report for 1872 gave the commissioners particulars of only 283 such societies, with 101,516*l.* funds; and of these 237 societies had 22,691 members. Other female societies are enumerated in other classes, and many are unregistered.

Class 12 is rather various than numerous, and is therefore very suitable for my present object; it consists of the societies for purposes authorised by the Secretary of State as those to which the powers and facilities of the Friendly Societies Act ought to be extended. Among these purposes are—assisting members travelling in search of employment; assisting members during slack seasons of trade; granting temporary relief to members in distressed circumstances; purchase of coals and other necessaries to be supplied to members; relief or maintenance in case of lameness, blindness, insanity, paralysis, or bodily hurt through accident, &c. Some of them amount to little more, as the commissioners say, than "liberal "interpretations of the Act." In addition to these, however, there have been authorised the assurance against loss by disease or death of cattle employed in trade or agriculture; relief in case of shipwreck, or loss or damage to boats or nets; and "societies for social "intercourse, mutual helpfulness, mental and moral improvement, "rational recreation," &c., commonly called "working men's "clubs."

Class 13, "cattle insurance societies," deserves mention as showing the wide range which the Friendly Societies Act has been made to cover; and also on account of the special privileges as to insurance without limit, and as to the power to recover contributions by legal process, which have been given to these societies by the Act 29 Vict., cap. 34. They complete the enumeration of the varieties of societies enjoying full registration under the 18 and 19 Vict., cap. 63. The following is a return of the total number of societies which have been enrolled or registered under the Friendly Societies Acts since the year 1793, and of the number of alterations of rules registered:—

	Rules of Societies.	Alterations of Rules.	
1793 to 1855	26,034	14,864	These societies were enrolled or registered under the several Acts repealed by the 18 and 19 Vict., cap. 63.
23rd July to 31st Dec., 1855	201	214	These registrations have taken place under 18 and 19 Vict., cap. 63.
'56........	830	832	
'57........	822	899	
'58........	779	997	
'59........	956	1,045	
'60........	1,100	1,140	
'61........	1,288	1,182	
'62........	1,277	1,277	
'63........	1,054	1,231	
'64........	1,056	1,352	
'65........	1,076	1,248	
'66........	1,176	1,487	
'67........	1,134	1,542	
'68........	1,112	1,327	
'69........	1,262	1,259	
'70........	998	1,274	
'71........	1,048	1,249	
'72........	1,665	1,621	
'73........	1,224	1,593	
	46,092	37,633	

Note.—See also Table III, Appendix.

Besides the registered societies there are over 500 societies which have deposited their rules with the registrar, under section 44 of the Friendly Societies Act of 1855, and by that means secured protection for their funds and the right to settle disputes under their rules. The deposit of the rules of a considerable number of these societies has, however, been rendered void by the Trade Unions Act, 1871. They form the commissioners' fourteenth class.

Another small class (the fifteenth) is that of societies whose rules have been certified under the 11th section of the same Act "for "relieving physical wants and necessities of the poor, or improving "their dwellings, or granting pensions, or providing habitations." Under these words a very wide range of societies might be included —one witness said that 900 existed in London alone—but, in fact, very few have been so certified.

The sixteenth class is "societies under the earlier Friendly "Societies Acts." These have been already stated to have been 26,034 in number altogether.

The commissioners' seventeenth and last class is that of societies which are wholly unregistered, and they state that in England these are nearly co-extensive with, in Scotland certainly far surpass in magnitude, the registered bodies. In this fact lies the great difficulty of the problem now before the legislature. If the enlightened liberality of the provisions of 18th and 19th Vict., cap. 63, has only reached half of the bodies for whose benefit it was intended, how are those provisions to be modified so as to cover the whole field? Much may be done in this respect, we think, by the powers of diffusing information, and of compiling tables of statistics and of contributions, which Sir Stafford Northcote's Bill confides to the registrar. Few of the unregistered societies are aware, for instance, of the grave doubt which has been thrown on their position by the passing of the Life Assurance Companies Act of 1870.

So much for societies under the Friendly Societies Act, which are surely various, numerous, and important enough to justify the attention I have asked you to pay to them. I need not say that we have been merely skimming the surface of the vast collection of facts accumulated by Her Majesty's commissioners with respect to them. It remains for me briefly to mention several other classes of societies at present regulated by other Acts of Parliament, which are so cognate in their form of organisation to the friendly societies proper, that, as it seems to me, the legislature should deal with them in the same manner.

1. *Trade Unions.*—These are usually, in fact, friendly societies and something more. The necessity that one of their objects should be in restraint of trade applies only to that object, and they have frequently the additional objects of ordinary sick and death pay assurance, as in a friendly society proper. It is not quite easy to see, therefore, upon what ground the inclusion of trade unions in the first draught of the Bill of 1874 could justly be made matter of complaint against that Bill, particularly as, in respect to death pay, they are in the same doubtful position with regard to the Life Assurance Act of 1870 as unregistered friendly societies. Many of the provisions of the Trade Unions Act might with advantage be extended to friendly societies; for example, the complete elasticity of the organisation of branches under that Act, by which any amount either of control or of independence may be secured to them; but, with the single reservation of anything that may look like encouragement of objects in restraint of trade, both classes of societies are entirely on the same footing.

The circumstance that the trade unions, particularly the more important of them, have hitherto abstained from accepting the advantages of registration, with its accompanying restrictions, is evidence that the principle of separate legislation for their interests has, to some extent, broken down. Less than 200 unions have yet been registered under the Act 34 and 35 Vict., cap. 31, which became law on the 29th June, 1871. Of those making returns for 1873, only forty-four were of well-established trade unions existing before 1871, and these had together 223,534 members, an income of 240,114*l.*, and realised funds amounting to 202,010*l.* The largest is the Amalgamated Association of Miners, Manchester, with 105,028 members, and 66,321*l.* income, out of which, though established in 1869, it had only saved 17,591*l.* The next in extent and the richest in funds, is the Durham Miners' Association, whose members exceed 40,000, and contribute an annual income of 48,064*l.*, out of which 50,544*l.* has been saved. The whole number have saved, on the average, less than a year's income.

2. *Industrial and Provident Societies* differ from friendly societies in two respects—they are instituted for the purpose of carrying on trade, and they are incorporated bodies, not acting by trustees. By the Industrial and Provident Societies Act it is provided that the liability of the members is limited in amount to that unpaid on their shares, and in time to one year after they are transferred. At first sight, therefore, it would seem that these societies should be dealt with rather as joint stock companies, with limited liability, than as friendly societies, which are mere voluntary associations, mutually benefiting the members, and it cannot be denied that such has been the tendency of the more recent enactments—the Act of 1867 being more on the model of the Companies Acts than those of 1862 and 1852. The real test of an industrial society is, however, the membership and not the shareholding; shares are withdrawable as well as transferable; and the capital is not fixed as in an ordinary company, but variable.

With regard to the incident of incorporation, which applies to industrial and provident societies, and (as we shall see presently) to building societies, I confess I see no reason why it might not apply, to some extent, to friendly societies also. The procedure by means of trustees, invented by the astuteness of a past generation of lawyers to evade legislation against societies, is quite out of place in a system by which societies are encouraged. Under the old Friendly Societies Acts, it was, no doubt, contemplated that the trustees would act as a sort of guardians to the societies, and provision was made that they should be householders, and so forth. In neither point of view does it now seem to be necessary that this machinery should be retained; it is not easy to see why any body of men associating themselves together for any purpose may not properly be dealt with as corporate. Provision for optional incorporation to friendly societies was contained in the Bill of 1874.

The real test, with regard to industrial and provident societies, is that adopted by the legislatures of France and Belgium, in their enactments upon the subject of *sociétés*, as all bodies corporate are there called. The distinction there drawn is between societies of the several classes which have fixed capital, and *sociétés à capital variable*, which increase their capital from time to time from the growing savings of their members.* The rapid growth of the capital of industrial and provident societies may be tested by a comparison of the returns for 1864 and 1873, as presented to Parliament by the registrar of friendly societies for England. In 1864, 395 societies had a capital of 685,072*l.*, contributed by 129,761 members; in 1873, 790 societies had a capital of 3,334,104*l.*, contributed by 340,930 members; capital increasing fivefold, societies and members twofold. That is, in 1864, each society had a capital of 1,734*l.*; in 1873, 4,220*l.*; in 1864, each member had a capital of 5*l.*; in 1873 of 10*l.*; and the total number of societies and members had doubled. (See Table IV, Appendix.)

The promoters of industrial and provident societies, however, do not share the feeling expressed by some of the other classes of societies against being dealt with in a comprehensive manner. In a Bill which they have prepared for introduction during the present session, I am informed that it is intended to incorporate the clauses relating to industrial and provident societies, which had to be dropped out of the first edition of the Friendly Societies Bill of 1874; so that if they succeed in passing it, the two classes of societies, though dealt with by separate Acts, will be dealt with on similar principles.

3. *Benefit Building Societies.* The law with regard to these institutions has recently undergone a considerable change by the passing of the Act 37 and 38 Vict., cap. 42 (Sess. 1874), "to Consolidate and Amend the Law Relating to Building Societies." That statute affords no obstacle to the unification of the law relating to societies cognate with friendly societies. Indeed, its main object is to assimilate the law of building societies with that now affecting friendly societies, and to remove the curious anomaly that the old Acts of 1828 and 1834 relating to friendly societies still applied to building societies, although they had been repealed for every other purpose. The Act of 1874 brings future building societies under the control of a single statute, which represents as nearly as possible the existing law relating to friendly societies and trade unions. The building society is now, like the industrial and provident society, a body corporate; having a common seal, and perpetual succession, until dissolved or terminated in the manner which the statute prescribes in that behalf. The confusion into which the method of dissolving a benefit building society had

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* The text of the French law is given in Brabrook "On Industrial and Provident "Societies," 1869.

fallen, previous to the passing of this Act, is a strong instance of the mischief of the present fragmentary method of legislation. The Act of 1828 was for friendly societies alone, and that of 1836 applied its provisions to benefit building societies, so far as they could be made applicable, which the clause for dissolution could not be made. If the Act of 1828 had been a comprehensive statute applying to all societies, a general provision for winding up would have been contained in it, and the special provisions for friendly societies separately introduced. It was a comprehensive statute to a much greater extent than more modern ones; but not sufficiently so to meet this difficulty, which of course was then unforeseen; hence building societies had to be wound up as companies.

4. *Savings Banks.* With regard to the initial organisation of these bodies, that has ceased to be matter of importance, since the establishment of the Post Office Savings Bank has rendered unnecessary any further voluntary effort. Accordingly, no new savings bank has been established of late years on the voluntary system, and it is not necessary now to devise any legislative method for the establishment of new voluntary or trustee banks. But the old savings banks still exist, and will no doubt continue to exist, at any rate as long as the difference between the rates of interest allowed by the two classes of banks continues in their favour. (See Table VI, Appendix.) For their management, legislation of some kind must be provided; at present it is given by the Savings Banks Act, 1867, and much may be said in favour of leaving that Act as it stands. One powerful reason is—that the trustee savings banks are in a very close connection with Government, though in law and in fact private institutions; hence they stand on a different footing from the other institutions named. In other respects, however, savings banks are precisely on the same footing as friendly societies, their rules are read by the same barrister, and their organisation is that of voluntary institutions, managed by voluntary trustees. Indeed, the 16th section of the Savings Banks Act enables the trustees of a savings bank to act as ordinary investment agents, without any restriction on the amount received, or the manner of investing it. Use of this section has been made by many of the trustee savings banks, and so far they are mere voluntary investment associations, acting without any check or restriction from any department of the Government. It is true that any mischievous effect of this is much qualified by the provision of the Savings Bank Act, that no trustee or manager shall draw any pecuniary benefit from deposits in the bank. There exist, however, many unregistered and unlicensed deposit or savings banks of various kinds.

Partaking of the characters both of savings banks and building societies, are certain institutions which flourish in Sheffield under the name of funding societies, and are wholly outside of any legal organisation or protection whatever. They have rules which purport to govern the members, but which of course are not enforceable either by or against them; and it would seem that practically they are little else than private investment agencies.* Mr. Lyulph Stanley's able Report to Her Majesty's Commissioners informs us that the sums entrusted to the managers of these societies amount to hundreds of thousands of pounds, contributed both by individuals and by societies. It will hardly be doubted that some means should be devised to induce these societies to bring themselves under whatever legal organisation the wisdom of Parliament may devise for those of like form.

5. With regard to *Loan Societies*, a strong case has been made out for a complete revision of the law as it relates to them, which is unsatisfactory from different points of view. Whether a loan society, pure and simple, is ever a good thing is a question that might admit of grave doubt, if indeed it might not at once be resolved by a firmly negative answer. But a form of loan society has flourished very extensively in Germany, under the fostering care of Herr Schultze Delitzsch, and the opinion is widely entertained that it might with great advantage be naturalised here. It differs from the loan society known to us in England by the circumstance that it is in truth a mutual society, the members uniting to give their joint security for the funds lent out. Upon such a system it is easy to see that a man whose probity and industry have won the confidence of his fellows may be assisted very effectively by them to take a step in advance.

The intention of the Act 3 and 4 Vict., cap. 110 (1840), as of that which preceded it (5 and 6 Wm. IV, cap. 23, 1835), was undoubtedly to encourage charitable loan societies. The great majority of the societies established under these statutes have in fact been of a very different character; the societies called Friends of Labour Loan Societies outnumber greatly the charitable or "benevolent" ones. A "friends of labour loan society" takes subscriptions of small amount, and lends the capital in sums not exceeding 15*l.*, upon conditions of repayment which are equivalent to 12 per cent. per annum compound interest. This rate of interest is supposed by the Act to be sufficient to pay all expenses of management, and dividends on capital; but the fact is otherwise in most of the friends of labour loan societies. Sympathy is frequently claimed for the borrowers from these societies; but we suspect it is due rather to the investors, who for want of a sufficient guarantee not unfrequently lose nearly all their funds. On the other hand, the benevolent loan societies, of which a few exist, complain that their operations are much restricted by the maximum limit of 15*l.* which the Loan Societies Act fixes for loans granted. They urge that 30*l.* or 50*l.* would be a much more useful limit; and cases are quoted of benevolent loan societies which have abstained from enrolment because their loans exceed the limit of the Act. It will thus be seen that, from both points of view, with regard to loan societies, legislation based on the purpose of the society, rather than its form, has been a failure. While in Germany the loan system introduced in 1853 is worked by 2,409 credit banks, and in 834 only of these banks the advances amounted during last year to 66,900,000*l.* sterling, the English loan system has been dwindling almost to nothing for several years, and is met with disapproval from all quarters. Statistics of loan societies in 1873 are given in the Appendix, Table V.

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* As to the legal position of unregistered societies, see Scratchley and Brabrook "On Building Societies," 1875, part 4.

6. *Scientific and Literary Societies.* At present these societies come under the attention of the barrister certifying the rules of friendly societies only for the purpose of obtaining exemption from rates on buildings they occupy. For every other purpose they are simply voluntary unregistered bodies, like an ordinary club, having no corporate existence, no power to sue, and holding their property through the antiquated and inconvenient medium of trustees alone. By the Companies Act of 1867, however, provision is made for the registration of societies for any scientific or literary purpose, as companies with limited liability, without the necessity of adding "Limited" to their name.* While this course is suitable for such societies as would formerly have obtained a charter of incorporation from Her Majesty, its expense and formality are undesirable for a vast number of societies of smaller means. These societies have a much closer affinity with friendly societies than they can possibly be shown to have with joint stock companies, with which they have little in common. Applying the test of membership or shareholding, it is evident that the members of a scientific society are such in their personal capacity, not by virtue of holding any portion of its capital. Applying, also, the test of variability of capital, that clearly applies to them, for members are at liberty to retire at pleasure, and the election of new members takes place without limit except any that the rules may impose. From every point of view, therefore, they should be removed from the class of companies either

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* So, also, by the 17 and 18 Vict., cap. 112, a statute drawn by the practised hand of Mr. W. G. Lumley, the power to hold land and the right of incorporation are given to literary and scientific societies.

with or without a declaration of limited liability, and should be recognised as societies.

Time fails to enumerate the many purposes of association for which an erroneous system of legislation might devise special forms, but which a sound and comprehensive system of legislation would embrace under one.

The unbounded ingenuity of projectors is always framing new purposes for association, and it is surely not the part of the legislature to attempt to restrain such developments of a beneficent principle. Take, for instance, at one end of the scale the numerous provident dispensaries,* and at the other the numberless small clubs for the purchase of sewing machines, for the purchase of pianos, and other conveniences or necessaries by small weekly subscriptions, which, though not of sufficient importance to require special legislation, should be encouraged to come under a general scheme of legislation. It is very likely that the subscribers to these little concerns are much in need of protection, and that registration and publicity would be remedies for many abuses likely to arise in connection with them. The Friendly Societies Act of 1834, had it been a carefully-drawn measure, complete in itself, instead of merely amending the Act of 1828, would have answered many of the purposes here advocated. It authorised the establishment of societies, under the Act of 1828, for the mutual relief of the members and their families in sickness or other contingencies calculable by way of average, "or for any other purpose which is "not illegal." Into this definition of purposes the *ejusdem generis* clause must of course be introduced, but I suspect that it always received from the administrator of the statute a liberal construction. Hence the building societies established before 1836, and the industrial societies established before 1846; and hence also a variety of societies established before the last-mentioned date, for purposes equally deserving of recognition and protection. The first draft of the Friendly Societies Bill of 1874 restored the complete elasticity of purpose which was embodied by the Act of 1834, with the improvements in machinery which later Acts have produced. This was done, too, as my friend Mr. Ludlow (now the registrar of friendly societies) states, in his paper before the Social Science Congress at Glasgow, by the addition of only six sections, and the revision, by which the present Bill has been limited to societies under the Friendly and Cattle Insurance Societies Acts, leaves nearly 100 superfluous sections upon the Statute Book. The multiplicity of the present statutes, and the inconsistency of their provisions, will appear from Tables I and II in the Appendix.

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* I have been favoured by Mr. W. Marchant with some interesting information on the subject of provident dispensaries. The first of these institutions was opened at Southam in 1830, and there are now twenty-five or thirty in active operation. One of the most important is that at Nottingham, the medical staff of which saw 46,101 patients during the year 1873. In a pamphlet by Mr. O'Hanlon, statistics are given of eighteen provident dispensaries, having an income from the subscriptions of free members of 11,128*l.*, aided by honorary subscriptions, amounting to 3,608*l.* The number of members in eleven of the institutions, according to the then last return, was 55,285. "The Annual Directory of the Ancient Order of "Foresters for 1875" (a most interesting collection of facts relating to that body, compiled with great care by the Secretary, Mr. Shawcross) contains particulars of twelve "friendly societies' medical associations," recently established, most of which are registered as friendly societies for providing medical attendance and medicine for the members and their families. More than 255 societies are in connection with these associations, which have over 30,000 members, and dispensed more than 100,000 prescriptions during the year. The aggregate income of ten of the associations was 4,400*l.*

APPENDIX.

Table I.—*Statutes affecting Societies.*

18 and 19 Vict., cap. 63	Friendly societies.
21 and 22 „ 101	
23 and 24 „ 58	
29 Vict., cap. 34	Cattle insurance societies.
25 and 26 Vict., cap. 87	Industrial and provident societies.
30 and 31 „ 117	
34 and 35 „ 80	
34 and 35 Vict., cap. 31	Trade unions.
10 Geo. IV, cap. 56	Benefit building societies.
4 and 5 Wm. IV, „ 40	
6 and 7 Wm. IV, „ 32	
37 and 38 Vict., cap. 42	Building societies.
26 and 27 Vict., cap. 87	Savings banks.
3 and 4 Vict., cap. 110	Loan societies.
26 and 27 „ 56	
6 and 7 Vict., cap. 36	Scientific and literary societies.
17 and 18 „ 112	
30 and 31 „ 119	
24 and 25 Vict., cap. lxxxvi.	Private savings banks.
31 and 32 „ clxxii.	
36 and 37 „ clxxxi.	

TABLE II.—*Comparative Statement of the Procedure for Certifying Rules under the*

	Friendly Societies. 18 and 19 Vict., cap. 63., sec. 25.	Provident, Benevolent, and Charitable Societies. 18 & 19 Vict., c. 63., s. 11.	Industrial and Provident Societies. 30 and 31 Vict., cap. 117.
Number of copies of the rules* to be furnished.	2	2	2
Whether written or printed	Either	Either	Either
By whom to be signed	3 members and the secretary	3 members and the secretary.	7 members and the secretary.
What provisions they are to contain.	Those required by 18 & 19 Vict., cap. 63., sec. 25.	Provision for trustees, treasurer, audit, and disputes.	Those required by schedule to Act.
With what documents the rules are to be accompanied.	—	—	—
What the registrar (or barrister) is to do with them.*	Advise with the secretary whether they will carry out the object, and ascertain whether they are in conformity with law, &c.	Ascertain that they are not repugnant to law.	Same as Friendly Societies.
How many certificates he is to give.	1	1	2
Their purport	That rules are in conformity with law, and that society is established, and entitled to privileges and subject to provisions of Act, and whether or not rates are stated to be prepared by an actuary.	That rules are not repugnant to law.	(1) That society is registered; (2) that rules are in conformity with law, and that society is established, and entitled to privileges and subject to provisions of Act.
What fee is payable for certificate.	None	None	None
What is done with the transcripts of rules.	Kept by registrar	Kept by registrar	Kept by registrar
Effect of certificate	That the society is entitled to privileges and subject to the provisions of Acts.	That certain sections of Act apply to the society.	That the society becomes a corporate body, and the provisions of the Acts apply to it.
Authority of Registrar (or barrister) over society after certificate.	To certify alterations; to require and enforce returns; to transfer stock; to record trustees and place of meeting; to prosecute for misappropriation of funds; to restrain change of name; to dissolve an insolvent society; to advertise a voluntary dissolution.	To certify alterations; to record trustees.	To certify alterations; to require and enforce returns and call for evidence; to restrain change of name; to record place of meeting, and proceedings in winding up.

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* The practice under all the statutes (except the Trade Unions Act) is for a draft copy, either manuscript or

several Acts of Parliament which impose that Duty upon the Registrar and Barrister.

Trade Unions. 34 and 35 Vict., cap. 31.	Savings Banks. 26 and 27 Vict., cap. 87.	Building Societies. 37 and 38 Vict., cap. 42.	Loan Societies. 3 and 4 Vict., c. 110.	Scientific and Literary Societies. 6 and 7 Vict., cap. 36.
2	2	2	3	3
Printed	Either	Printed	Either	Either.
7 members	2 trustees	3 members and the secretary.	3 members and the secretary.	The president, 3 of the council, and the secretary.
Those required by schedule to Act.	Those required by sec. 6 of Act.	Those required by 37 & 38 Vict., cap. 42, sec. 16.	Those required by ss. 22 and 23 of Act.	A rule prohibiting division of money among the members.
An application for registry in the prescribed form.	—	An application for registry in the prescribed form [and a declaration, if the society be an existing one].	—	—
Ascertain that the regulations are complied with, and the required provisions contained in the rules.	Ascertain whether they are in conformity to law, &c.	Ascertain whether they contain the required provisions, and are in conformity with the Act.	Ascertain whether they will carry out the intention of the framers, and are in conformity to law.	Ascertain whether the society is one entitled to the benefits of the Act.
1	1	1	1	1
That trade union is registered.	That rules are in conformity to law and with provisions of Act.	That society is incorporated under Act.	That rules are in conformity to law and with provisions of Act.	That society is entitled to benefits of Act.
1l. to be paid by registrar into Exchequer.	One guinea, to be paid to barrister.	1l. to be paid by registrar into Exchequer.	One guinea, to be paid to barrister.	One guinea, to be paid to barrister.
Kept by registrar.	Sent to National Debt Commissioners.	Kept by registrar.	One sent to clerk of peace, the other kept by barrister.	One sent to clerk of peace, the other kept by barrister.
That the provisions of Act apply to the trade union.	That the provisions of Act apply to the savings bank.	That the provisions of the Act apply to the society.	That the provisions of Act apply to the society.	That the society is exempt from local rates in respect of any building occupied exclusively for its purposes.
To certify alterations; to require and enforce returns; to record place of meeting.	To certify alterations; to settle disputes; to authorise payments in certain cases.	To certify alterations; to require and enforce returns; to transfer stock; to register change of name; to register dissolution; to determine disputes, if required. [The registrar has other functions in respect to societies certified under 6 & 7 Wm. 4. c. 32, and their incorporation.]	To certify alterations; to require and enforce returns.	To certify alterations affecting property or constitution of society.

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proof, to be submitted in the first instance for examination before the fair signed copies are sent for certificate.

TABLE III.—*Friendly Societies*, 1873.

1 Counties.	2 Societies appearing on the Register as in Existence from which Returns were Required.	3 Number of Returns Received.	4 Class 1. — Branches of Affiliated Orders.	5 Classes 2 to 8. — Benefit Societies Generally.	6 Class 9. — Burial Societies	7 Class 10. — Annuity Societies	8 Class 11. — Societies of Females.	9 Amount of Funds, where Stated.	10 Number of Members, where Stated.
ENGLAND.								£	
Beds	225	114	56	53	—	—	3	55,912	9,926
Berks	171	86	43	43	—	—	—	53,523	8,896
Bucks	186	92	41	51	—	—	2	70,052	9,261
Cambridge	199	110	64	46	—	—	—	58,208	11,307
Cheshire	674	399	302	57	26	—	14	258,250	92,036
Cornwall	232	101	55	45	—	—	1	75,090	10,546
Cumberland	152	89	74	9	6	—	—	58,672	12,898
Derby	602	363	259	76	7	—	21	190,436	38,181
Devon	501	250	112	109	6	8	15	413,182	33,139
Dorset	192	85	49	36	—	—	—	61,426	10,685
Durham	789	476	392	53	4	—	27	156,771	47,730
Essex	464	177	107	68	1	—	1	259,047	30,696
Gloucester	576	255	142	108	—	—	5	145,864	26,732
Hants	422	241	168	65	5	—	3	179,813	39,586
Hereford	72	34	22	10	—	—	2	32,313	3,421
Herts	210	85	37	46	—	—	2	139,552	11,903
Hunts	95	38	18	20	—	—	—	24,040	3,444
Kent	616	394	273	101	18	—	2	277,854	40,169
Lancaster	2,790	1,655	1,000	539	87	—	29	1,383,466	485,344
Leicester	501	280	177	78	3	—	22	131,936	21,489
Lincoln	439	268	202	60	5	—	1	139,486	26,215
Middlesex	1,345	858	550	294	11	—	3	1,011,376	151,096
Monmouth	554	217	167	39	3	—	8	83,184	17,055
Norfolk	584	258	159	88	10	—	1	173,952	26,296
Northampton	365	220	98	117	1	—	4	126,747	19,072
Northumberland	409	255	199	44	4	—	8	107,177	23,636
Nottingham	373	192	130	53	—	—	9	75,062	19,192
Oxford	183	97	26	71	—	—	—	42,374	6,931
Rutland	32	17	9	8	—	—	—	9,820	1,354
Salop	297	185	138	45	—	—	2	170,886	21,420
Somerset	467	150	84	62	—	—	4	115,882	13,099
Stafford	578	483	349	116	8	—	10	281,378	86,409
Suffolk	465	174	106	67	1	—	—	166,248	21,728
Surrey	709	435	317	108	5	—	5	248,685	51,240
Sussex	319	208	151	55	2	—	—	176,337	23,583
Warwick	585	269	159	96	3	—	11	346,662	77,311
Westmoreland	44	31	29	2	—	—	—	31,466	3,957
Wilts	168	88	51	37	—	—	—	84,327	17,905
Worcester	438	208	126	74	—	—	8	121,467	20,668
York	1,722	1,070	847	191	15	—	17	725,333	132,033
Total	19,745	11,007	7,288	3,240	231	8	240	8,263,254	1,707,599

TABLE III.—*Friendly Societies*, 1873—*Contd.*

1 Counties.	2 Societies appearing on the Register as in Existence from which Returns were Required.	3 Number of Returns Received.	4 Class 1. — Branches of Affiliated Orders.	5 Classes 2 to 8. — Benefit Societies Generally.	6 Class 9. — Burial Societies	7 Class 10. — Annuity Societies	8 Class 11. — Societies of Females.	9 Amount of Funds, where Stated.	10 Number of Members, where Stated.
WALES.								£	
Anglesey	19	6	2	4	—	—	—	2,095	176
Brecon	133	45	28	15	1	—	1	16,900	2,281
Cardigan	76	18	6	10	—	—	2	4,702	1,648
Carmarthen	171	102	55	45	1	—	1	42,924	9,018
Carnarvon	54	29	9	20	—	—	—	15,578	2,802
Denbigh	126	49	25	21	—	—	3	26,168	5,638
Flint	115	61	41	15	2	—	3	21,767	5,026
Glamorgan	1,077	514	400	103	2	—	9	177,883	41,557
Merioneth	89	34	20	12	—	—	2	8,503	4,114
Montgomery	48	26	13	12	—	—	1	24,521	3,133
Pembroke	44	26	13	13	—	—	—	14,160	2,593
Radnor	13	9	3	6	—	—	—	12,070	1,706
Total	1,914	919	615	276	6	—	22	367,271	79,692
England	19,745	11,007	7,288	3,240	231	8	240	8,263,254	1,707,599
Wales	1,914	919	615	276	6	—	22	367,271	79,692
Total	21,659	11,926	7,903	3,516	237	8	262	8,630,525	1,787,291

TABLE IV.—*Progress of Co-operative Societies* (*England and Wales*).

	1864.	1867.	1873.
Number of societies making returns	395	577	790
„ members „	129,761	171,897	340,930
Increase of members in the year	13,958	17,827	38,734
	£	£	£
Amount of share capital (paid-up)	685,072	1,475,199	3,334,104
Increase of share capital in the year	122,604	135,907	496,953
Amount of loan capital	89,423	136,784	431,808
Increase of loan capital in the year	10,893	15,163	78,873
Cash paid for goods during the year	2,578,933	5,337,262	12,344,780
„ received „	2,742,957	6,001,153	13,651,127
Average stock in trade	—	583,539	1,439,137
Expenses of management (including interest)	215,181	283,356	693,880
Total liabilities	—	1,589,245	4,081,512
„ assets	891,775	1,858,616	4,430,334
Value of buildings, fixtures, and land	—	525,463	1,361,197
Capital invested with other societies and companies	—	494,429	781,535
Disposable net profit of the year	225,569	398,578	958,721

TABLE V.—*Statistics of Loan Societies making Returns for* 1873.

Number of societies	464
" members	82,100
Payments of members to capital in the year	204,128*l.*
Amount in borrowers' hands	380,543*l.*
Amount circulated during the year	613,963*l.*
Number of applications for loans during the year	184,700
" granted	124,664
Amount received for inquiry forms and interest	38,459*l.*
Expenses of management	17,797*l.*
Net profits	17,461*l.*
Summonses issued during the year	8,201 to recover 15,896*l.*
Distress warrants issued	1,614
Amount recovered	12,772*l.*
Costs not recovered from borrowers	337*l.*

TABLE VI.—*Depositors in Savings Banks.*

	1865.		1873.	
	Number.	Amount.	Number.	Amount.
I. Trustee Savings Banks—		£		£
(*a.*) Individual depositors	1,441,271	36,090,557	1,417,958	37,636,457
(*b.*) Penny banks	892	65,446	990	79,952
(*c.*) Charitable institutions	14,623	704,978	14,590	734,620
(*d.*) Friendly societies	11,704	1,884,317	11,952	2,074,060
Total	1,468,490	38,745,298	1,445,490	40,525,089
II. Direct with the National Debt Commissioners—				
(*e.*) Friendly societies	528	1,915,703	432	1,778,574
III. Post Office Savings Banks—				
(*f.*) All deposits	611,384	6,526,400	1,556,645	21,167,749
Total	2,080,402	47,187,401	3,002,567	63,471,412

DISCUSSION *on* MR. BRABROOK'S PAPER.

PROFESSOR LEONE LEVI said he should like to ask Mr. Brabrook one or two questions. He found from the paper that there were 46,000 societies registered. Of these there appeared to be 22,000 in existence, and of these again only 11,000 sent returns. How did it happen that only one-half of the societies in existence sent returns according to the Act of Parliament? He should like to know whether the present legislation on the Bill before the House introduced by the Chancellor of the Exchequer would be the means of securing returns, and what means there were in the hands of the registrar for securing them. It was gratifying to find from the paper that about one-half (11,000) of the societies supposed to be at present in existence had been created within the last ten years, representing at least 7,000,000*l.* of capital, taking them at 700*l.* each. There also appeared to be the large increase of 2,000,000*l.* in the capital of co-operative societies within the last eight or nine years, and 16,000,000*l.* in the capital of the savings banks, making together about 25,000,000*l.* increase in the capital representing the savings of the people within the last ten years. This amount comprised the savings of the middle classes as well as the working classes. He thought that the savings ought to be considerably greater considering the great increase in wages; but still, the fact as it stood was very gratifying. He would like also to ask what classification was proposed to be made as regards the various societies which, he apprehended, were now grouped roughly together. If actuarial tables had to be constructed in a scientific manner for the contingencies of life and death, he apprehended a much greater subdivision of societies would be required than had at present been made, and he did not know whether the new Bill provided for this. The new Bill was important in so far that it provided that the Government should, in a measure, be responsible for the solvency of these societies—at all events that the Government had seen to them and had taken proper steps to assure themselves that such societies were established on a proper and safe footing. But he would ask, how far was it the province of Government to do so, and would it accomplish its object? The Bill seemed rather mixed, because, whilst it called upon societies to provide their own actuaries and their own auditors, it also left power to the Government in certain cases to appoint auditors and to appoint an actuary. As far as he could see, the Bill was neither one thing nor another. It did not go as far as to satisfy the public that the Government had taken cognizance of the real condition of these societies—and if it attempted so much he did not think it would succeed—and yet it provided means which might give rise to the opinion that Government had taken cognizance of them, and thus create an amount of confidence that ought not to exist. He was very glad that the paper had been brought before the society by Mr. Brabrook, in whom both legal and statistical knowledge were combined. The paper was at the present time exceedingly opportune and welcome.

Dr. **Farr** said he would like to ask the author if he had anything to say in reference to the interest paid on the two classes of savings banks. He observed that the trustee savings banks had 40,400,000*l.* of deposits, and that the post office savings banks had 21,000,000*l.* If it was understood that the rate of interest differed in those two classes of banks, it would be exceedingly interesting if the author could say what the rate of interest is, and whether the Government are gainers or losers by having to do with these savings banks.

Mr. **Brabrook** said, with respect to the point raised by Professor Levi, that there was great difficulty under the present law in enforcing returns. Some years ago a number of summonses were taken out against societies which did not make returns, and penalties were enforced; but as the summonses had all to be taken out at Westminster, the number of the societies which could be reached within convenient distance of the Westminster Police Court was so small that to persevere in that course for years would be to harass the same societies. The Bill contained provisions for a more effectual method of enforcing returns, and it also contained a classification for legal purposes. For instance, societies having collectors were distinguished from societies having branches, and there were several other methods of classification. He understood Professor Levi to refer to classification for actuarial purposes, but that was a matter which seemed to him would arise on the carrying out of the measure in collecting the statistics which it contemplated. With regard to the question of interest on deposits in savings banks, the National Debt Commissioners allowed to the managers of the trustee savings banks interest at the rate of 3¼ per cent., out of which the trustees were required to spend 6*s.* 8*d.*, or more, and might give the whole of the remainder, if they thought fit, to the depositors. They gave rates of interest varying from 2½ to 3 per cent., and that no doubt was an attraction to depositors over the 2½ per cent. given by the post office. This was shown by the fact that the trustee savings banks had 40,000,000*l.* of deposits, while the post office had not reached more than 21,000,000*l.* With regard to the difference of cost to the nation, that depended on the expenses of the post office savings banks. The Government paid 2½ and paid the expenses of the banks; while the trustee savings banks received 3¼ per cent. and paid their own expenses.

Mr. **Lumley**, Q.C., asked what security there was for the accuracy of the returns. There seemed to him to be considerable difficulty about that matter, and unless the persons giving false returns could be prosecuted, he was afraid that not much faith could be placed in them.

Mr. T. Y. **Strachan** thought that the Government had assumed a difficult task in undertaking the management of these large societies. He submitted that a very large and important question had been opened up by Professor Levi, when he suggested that the Government were not only to be responsible for what societies had done in the past, but that they were to undertake some means of proving the solvency of societies in the future by publishing tables, which, if societies adopted, they might assume they would be solvent, but which, unless they were very extensive, could not be applicable to every society. It was a serious question, that if societies did certain things and obtained an *imprimatur* of some sort, that therefore they were to be considered safe, and that people being under the belief that the Government certified to their solvency would be induced to join them. He thought the loss would be greater than under the old system. It seemed to him that, touching that question, that was, perhaps, the best reason why the Bill should have contained a clause (which, he believed, had been struck out) against the insurance of infants. Infant mortality was so great, that tables necessary to provide for the insurance of infants would be so high that it would be practically inoperative, and that alone would have been a strong reason for adhering to the clause which excluded infant insurance from the Bill. It had been fairly shown by the paper how most of the old societies were being merged into the affiliated orders, and he thought, from long experience, that if those affiliated orders could have their interests promoted, they would be the best form of benefit society that could be had. The difficulty with small societies was, that they were managed by two or three working men, who were, no doubt, honest in their intentions, but were incapable of making the returns the society required to be made, and were incapable of judging whether the society was so conducted as to be safe and to provide the benefits intended to be provided by the rules. The consequence was, that there was a failure of the societies, and an unjust outcry against the law itself, because all that the law could do, was to say that societies as such should have the right to sue and be sued, and should have some sort of existence recognised in law. Registration giving them that advantage would be of some value, but if registration was supposed to carry with it to the vulgar mind the idea of solvency or sufficiency, then great caution should be exercised in deciding whether it was practicable or possible.

Mr. PEACOCK said he thought that building societies generally looked with a considerable amount of respect on their trustees, and they believed, whether rightly or wrongly he did not wish to discuss, that so long as they had trustees, those trustees would protect the interests of the members. In consequence of that belief, many societies had not enrolled themselves under the Act of 1874. If that was the feeling with regard to building societies, he believed it existed to a very much greater extent with regard to friendly societies. He thought it was a matter worthy of consideration, and he was sure that the only thing to disabuse the mind of the public upon that question would be the reading and publication of such papers as the one that had been read by Mr. Brabrook.

Mr. HYDE CLARKE said that the anomaly pointed out by

Mr. Brabrook in our legislation seemed to be one deserving of consideration for the purpose of unification. The incorporation of what might be called benefit societies was certainly an old principle, because it was one which at an early period was considered useful and was applied to the trade guilds of the country at large. It was certainly, at the present day, available under many circumstances.

In the Joint Stock Companies' Act, there seemed to be an approximation in one sense, to the principle referred to by Mr. Brabrook and Mr. Peacock. He meant that part of the Act which enabled the Secretary of the Board of Trade to grant a licence for the purpose of incorporation of societies which were not intended for personal profit, but had for their object the benefiting of trade, religion, charity, learning, and other useful purposes. It was very much to be regretted, that that very liberal measure of incorporation provided by the Government had been turned to very little account. He believed, however, that those who had taken the most advantage of it, were in the best position to know its value. He referred to that branch of the legal profession which included the solicitors. Most of the local law societies had, so far as he knew, incorporated under that provision. The public generally were not aware of its true bearing. As it was included in the Joint Stock Companies' Act, and as it was really necessary in the first instance, that a memorandum of association should be sent in under the Joint Stock Companies' Act, the public were not aware that a learned society like the "Statistical," could really have the benefits of incorporation on a very moderate scale. Mr. Brabrook had lately applied that principle of incorporation in the case of a very useful society. He thought the society was indebted to Mr. Peacock for calling attention to such a practical point as that of institutions formed by the working classes attaching considerable importance to their having trustees, although unfortunately, in many cases, he apprehended, many of these societies had no trust deeds at all. Mr. Brabrook had called attention to the very large amount of deposits now made in savings banks. The sum of 6,000,000*l.* in post office savings banks was certainly not contemplated when encouragement was given for their formation, and when it was considered how those contributions of the working classes and the lower and middle classes had become of importance under the direction of the Chancellor of Exchequer, and that they tended in a considerable degree to steady the operations of the public stock markets, they were well worthy of consideration; and their influence as well as that of the measure lately brought in by Sir Stafford Northcote to provide a sinking fund, would, it was to be hoped, give a degree of stability to our funded system which, he was sorry to say, it had hitherto to some extent been deprived of. While nearly every country in the world, and a great many of our own municipalities had found it right and desirable to make a provision for the liquidation of their debt, this country had for some time stood alone in resisting any formal measure to that effect. The casual application of balances was certainly not a measure which did honour to the finance or organisation of the country. He had taken the liberty of calling attention to some of these points, but Mr. Brabrook's paper contained many more which illustrated the general connection of the interests of all classes of society, and the way in which careful legislation might bind together the various members of the community.

Mr. LUDLOW (Registrar of Friendly Societies) said that the paper might be considered to a great extent as an elegy, couched in very affectionate terms, upon a departed Bill. The first Bill of last session on friendly societies had departed, and was not likely to be revived again this year. Nevertheless he believed that it contained a principle, not perhaps expressed with sufficient clearness, that of distinguishing between bodies of which it might be said that they rested in a great measure on the fact of membership on the one hand, and bodies which rested on the fact of capital on the other hand. He thought it would be found that a common tie of membership existed between all the societies which Mr. Brabrook enumerated, even between those where share capital existed, such as the industrial and provident societies. The limit of 200*l.* which is fixed in the holding of shares rendered membership an essential element; there must thus be a certain number of members for a given amount of capital. He thought that the Companies' Act machinery was very inelastic, whether it dealt with a company formed upon the basis of capital, or of membership. It required returns of the increase of capital, and increase of members in bulk; whereas on the contrary, in all the different societies which were dealt with under the common type of friendly societies, as well as the Society in whose rooms he was then standing (which was really existing under the same principle, though perhaps not having a legal constitution), the capital increased or diminished in the same ratio as the members increased or diminished. He thought this would always prevent the Companies' Act—unless it were largely altered—from obtaining much favour. The form of incorporation was one entirely unessential, as Mr. Brabrook had shown in his paper that two types of societies were registered at the same office as the friendly societies having corporate character, but they had no fixed amount of capital, which varied with the membership. It seemed to him that something different from our extremely formal incorporation might perhaps fulfil every purpose; namely, that principle which is so largely adopted upon the continent, and everywhere indeed where the English law did not extend, of giving a definite name—what the French call "raison sociale"—by which a society was recognised in law and was able to sue and be sued. It was very true that notwithstanding all the advantages which belong to a formal incorporation as compared with those which come from a society represented by trustees, there was a singular clinging to the trustee form on the part of many societies. That very day a building society applied at the registrar's office for certain amendments of rules, but although the new Building Societies Act confers the privilege of incorporation, it insisted in keeping its property in the names of trustees. Whilst the meeting would recognise the wide scope of Mr. Brabrook's paper, it was nevertheless quite evident to him (the speaker) that the current of thought on the part of those present had been all in one direction, that of the friendly society. Mr. Levi had made an objection to the Friendly Societies Bill that it was neither one thing nor the other; but a body of some 4,000,000 of men had to be dealt with. They had been offered the option of incorporation last year, but they had not availed themselves of it, and that privilege had to be taken from them. The bulk of those societies thus remained under the old trustee principle. They were so large and so numerous and they had done so great a work, that they were entitled to a consideration, and even to a humouring which might be inconsistent with strict science, but which, nevertheless, was practically necessary. Of the Bill now before Parliament he would say that although it did not settle anything, it would lay the groundwork of a new and more effective system which, with time and patience, might very extensively improve the condition of these societies. The fact that only half of the existing societies had sent in returns, showed how much yet remained to be done. Unless societies were compelled, year by year, to forward their returns, it would be quite idle to make provision for actuarial valuations and a number of things which were right in themselves, but must come in their proper order. The Bill required valuation, but allowed the societies to select their own valuers, and this was found fault with; but how was it possible to compel 21,000 societies all at once to submit to Government valuation when they were not compelled to do anything of the kind before? The step with regard to compulsory valuation—which he thought would be efficiently taken if the Bill passed—had been enormously smoothed by the proceedings taken by one of those societies on its own behalf. The moment the Manchester Unity, at its own cost, submitted to a valuation of all its branches, compulsory valuation became possible. But the very fact that the Manchester Unity voluntarily submitted to a valuation enabled all other societies to say, "Do not force your Government valuer upon us; wait and see if we do not value ourselves." It appeared to him that until a fair opportunity had been given to societies to do as the Manchester Unity had done, Government valuation should not be forced upon them; if it was attempted, he did not think the attempt would succeed. The Bill simply was designed to drive in the small end of a few wedges which might, ultimately, split large trees. His belief was that in the course of the next four or five years a large number of societies would value themselves with tolerable efficiency, that a very large number of them would audit their accounts with increasing efficiency, and that at the end of that period a great improvement would have taken place in the condition of these societies, and an opening be made for still further improvement. Although the Bill was little more than initiative, it was the beginning of a new and valuable system.

Mr. HYDE CLARKE explained that he did not refer to that portion of the Joint Stock Companies' Act as in any degree a means of incorporating friendly societies, but simply as an example that the Legislature had already extended the principles of incorporation in that direction, and recognised them as likewise under the Friendly Societies' Act. He also referred to it as an example of the recognition of membership. It might further be observed that that portion of the Joint Stock Companies' Act did not require cumbrous returns of members, but was exceedingly simple in its working. He should like to ask Mr. Brabrook whether he could give the society any information as to the facilities afforded for incorporation in the State of New York, and in other countries in which a system of English law prevails.

Mr. F. Saunders said he should like to ask the author if any return had been made or kept by the registrar of those registered companies, which had either partially or wholly failed to meet their engagements to their members. He thought such a return would be useful, especially if it gave the details and the proper reason for the default.

Dr. Farr said the Society was greatly indebted to Mr. Brabrook for having brought in such a succinct form so many valuable facts before it respecting friendly and other societies. He (Dr. Farr) thought that perhaps considerable blame attached, not to the registrar, but to the country for demanding returns from so many societies for a number of years, and making no use whatever of them. As he understood it, under the new Act there would be a provision whereby Mr. Ludlow, Mr. Brabrook, and their colleagues would be able to analyse the returns as they were sent in. The office with which he was connected generally succeeded in getting whatever returns were wanted. A complete list of all the officers exists, and dates are fixed beforehand on which every return has to be sent in; if the return does not arrive on the day, a circular is at once dispatched; if necessary, a second circular goes out on a settled subsequent date; and, finally, if the return does not come in, the Registrar-General himself writes in such terms as circumstances require. In this way the registration returns are got in every quarter from 2,194 registrars, in time to be analysed and published a month after they are due. The marriage returns are got in quarterly from 13,618 churches and chapels. At the census the householders' schedules were collected one day from 5,049,016 families. The first step is to get a complete list of the friendly societies; and this, I imagine, could be done through the officers of the Inland Revenue. Some such system as I have sketched should be adopted by Mr. Brabrook; and from the (Dr. Farr's) published experience of the Odd Fellows, of which body he was a member, he should say the returns would be of the greatest interest, not only financially, but as tending to improve the health of the country, and the condition of the working classes. Of course, the mortality in one class of workmen was greater than that in another, and different tables might be required for each, but there would be no difficulty in deciding what class of tables each society should employ. The Government should get the facts from the societies and publish general deductions, but he contended they should not attempt to audit their accounts. He had looked into the question of the insurance of infants, but he saw no statistical evidence to show that childrens' lives had been insured with a view of sacrificing them in order to get money from the societies. A few instances may have occurred, but that was not the general practice. He was, however, entirely against the insurance of children, because parents ought not to think of the death of their children as soon as they were born. The notion should be that children would live, and as a general rule they did live.

Mr. BRABROOK, in reply to the various questions put, said that societies were authorised under the present Act to forward their annual report, which the registrars were bound to accept, however meagre or inaccurate it might be, and therefore to that extent many of the returns were untrustworthy. The Chancellor of the Exchequer's Bill proposed that they should send their returns in a form which would be prescribed. The tendency of the Bill was to give information that would remove all errors in regard to societies by making popular and widespread the most accurate statistics that were obtainable. He was afraid he could not afford Mr. Hyde Clarke the information he desired about the State of New York, as he was not familiar with the practice there; but he agreed with the views expressed by Mr. Ludlow that the continental system of having a less formal kind of incorporation would be preferable to the system now adopted in England. Under the present law, if a society was supposed to be insolvent, application might be made to the registrar to inquire into its affairs and the state of its funds. Local registration was so much opposed by the societies that the portion of the Bill which provided for it had to be withdrawn; and, as it now appeared, there was nothing but central registration. A gentleman from a county in Wales called upon him and stated that he and a committee of gentlemen in the neighbourhood had been investigating the condition of all the societies in the county, and showed him a great quantity of statistics, which he said he was satisfied in his own mind represented every existing registered society. That was an illustration of how much might be done by local assistants, and how hopeless it was to do much without them. If either by voluntary assistants or by Government assistants working in the locality returns could be had from all parts, no doubt a valuable body of information would be obtained.

The PROGRESS *of* OUR FOREIGN TRADE, IMPORTS *and* EXPORTS, *during the* PAST TWENTY YEARS. *By* STEPHEN BOURNE, F.S.S.

[Read before the Statistical Society, 18th May, 1875.]

THERE are two purposes for which statisticians exist; two objects to be kept steadily in view by every collector of statistical information. The first is that of carefully gathering together facts and figures on every subject "calculated to illustrate the position and prospects of "society," and so storing them up as to be accessible to all who may need the information they afford. The second, that of from time to time selecting from the stores so accumulated such particulars as should command attention, whether from their intrinsic importance or their relation to the subjects occupying the thoughts of those who may not have time or opportunity for the task of personal research—thus giving a present value to past labour, and in effect materially influencing the course of human thought and action in all that relates to the property of the nation or the welfare of its members. It is the latter of these purposes which is attempted to be served by the present paper.

There can be little question as to the importance of the subject or the interest which is taken in it, by those who are inhabitants of a country so essentially dependent for its prosperity upon the continued progress of the trade and manufactures to which it owes its present greatness; and a belief that some light may be thrown upon our present condition and our future advancement, by a careful consideration of the history of the past, must be the excuse, if such be needed, for this endeavour to place its more prominent features before the Fellows of this Society.

In thus tracing back for some years the course which our foreign and colonial commerce has taken, recourse has been had to the successive volumes of the "Annual Statement of Trade and "Navigation" issued by the Statistical Department of the Board of Trade, from 1833 to 1870, and since then by the Statistical Department of the Customs, also for the figures relating to 1874 (since the Annual Statement is not yet published) to the Monthly Account prepared in the latter office. The whole of the figures used are taken from these publications, and therefore rest upon official authority, although for their collection into the tables appended to this paper and the calculations or conclusions founded upon them, the writer is individually responsible. The period of twenty years has been chosen not alone as a convenient one for which to exhibit the comparative results of our trading operations, but likewise from the circumstance that in that year a change took place in the method by which the import values and those for the exports of foreign goods were ascertained, which renders any accurate comparison with former years quite impossible. Prior to that year the values given were "official;" since that time "real;" "computed" up to and including 1870, and then "declared." By "official" is meant a calculation from the quantities "according to rates of value fixed "so long back as 1694."* By "computed real" is to be understood the average market value, "including all the charges of freight and "landing, but exclusive of duties."† The "declared" values should represent "the actual value of the goods at the time of importa-"tion,"‡ derived from a declaration required from the importers on the first entries passed by them for their goods. The "computed" and "declared" values should in the aggregate be alike, and may therefore be fairly compared with each other. Not so, however, with the "official," as was shown by a comparison of the two for the year 1854, in which they were prepared upon both systems, when—

	£
The old official value of imports amounted to §	124,338,478
New computed real value	152,591,813
Showing an excess of real value of 22¾ per cent. =	28,253,335

At the same time the exports of foreign and colonial produce were—

	£
Old official value	29,821,656
New real value	18,648,978
The old value being in excess 38 per cent. =	11,172,678

Two or three instances, taken from the same source, will still further illustrate the fallacy of this system, and show the impossibility of comparing the results attained under it with those under the present plan:—

1854.	New Real Value.	Old Official Value.
	£	£
Wood	11,064,094	1,812,690
Corn	21,760,283	10,138,778
Cotton, raw	20,175,395	28,656,756
Tea	5,540,735	8,579,203

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* "Preface to Annual Statement," 1854. † Ibid.

‡ "Monthly Account of Trade and Navigation," July, 1871.

§ "Annual Statement for 1854."

These examples are worthy of note, because it so often happens that ignorance of the change of system leads to the quotation of figures for values prior to 1854, as if they were of equal worth to those from that date forward. The same difficulty does not exist with regard to the export of British goods, the declared value for them having been adopted as far back as 1798.

Being thus restricted in the date to which we can go back for import values, the series commence with 1854. Another year would have been more satisfactory, since the Russian war, which then broke out, may be deemed to have affected the trade of that and the following year; but not to so great an extent, however, as might be supposed, as will appear from the *official* values of it and the few preceding years wherein there is much the same sequence, as is manifested by the real values of Table I (Appendix) for succeeding years.

	Imports.	British Exports.
	£	£
1849	105,884,263	63,596,025
'50	100,469,067	71,367,885
'51	110,484,997	74,448,722
'52	109,331,158	78,076,854
'53	123,099,313	98,933,781
'54	124,338,478	97,184,726

There are two aspects in which the commerce of the kingdom may be viewed: the one embracing all goods imported and exported, including those brought to it for a market and again carried abroad; the other excluding these and showing only the foreign and colonial goods retained, and the British goods exported. The first may be deemed the merchants' view, since to him it matters not whether the goods he sells are for home or foreign use, of home or foreign production. The latter, however, is the more important view to the political economist, since the general condition of the country is evidenced and influenced by its ability on the one hand to pay for the goods it consumes, and on the other, by its power to produce and sell the articles on which the employment of so large a portion of its population depends.

The several tables which will be found in the Appendix have been drawn out with the design of clearly showing:—

1st. The gradual yearly progress of our commerce under the three heads of original imports, re-exports, and retentions for home consumption or manufacture, with the percentage of increase or decrease in each year upon its immediate predecessor and upon the first year of the series, 1854. Also, in like manner, the total exports, divided into those of foreign or colonial origin, and those of home produce or manufacture; but it must be borne in mind that the exports of foreign and colonial articles thus shown are only those which leave our hands in an unaltered condition, for if subject to any manufacturing process or change of character, they become classified as of British manufacture and are included as such in the columns devoted to that class.

2nd. The proportion of trade carried on both inwards and outwards with the principal countries of whom we are customers and to whose markets we send our productions. These figures on account of the space which would be occupied by a statement of each year's traffic are only shown for every fifth year, and the percentage of increase as before upon the figures of 1854. A very imperfect idea, however, will be given of the extent to which we trade with many countries, from the indirect routes by which much of the transport is effected, and the varying channels through which this takes place. With some countries there is little but direct trade. Russia, for instance, neither receives nor sends us much but in vessels from or to her own ports and ours; but Germany obtains a large portion of her supplies—and forwards hers to us—through the ports of Holland, and even by railway through France. The goods which in ordinary seasons are shipped from Hamburg, when that port is closed by the ice, come to us *viâ* Altona, and then get credited to Denmark. A line of steamers in connection with the French steamers to the East, periodically takes large cargoes to Marseilles, for transmission to China, Hong Kong, Japan, and other places; and on their return voyages they bring back cargoes from those countries transhipped at the French port. Before the Suez Canal was made, the ships of the Peninsular and Oriental Company which now go through the canal cleared out in this country for Egypt, to which country the goods they carried were deemed to be exported; and in like manner goods brought through the Red Sea and overland to Alexandria, were treated as imports from that place. The same thing happens in the winter season with goods to and from Canada *viâ* Portland in the United States. This evil is, as stated in the "Monthly Return" for January of the present year, in process of correction, and so far as the ultimate destination is known, the exports are now credited to the countries to which they properly belong. Too much reliance must not, therefore, be placed on the relative extent of our trade with the various countries specified in the tables, since for this reason there is in many cases much intermingling of one with the other. Neither is it always right to judge of the growth or decline from year to year of the trade with any particular country, since with the starting of new lines of communication material changes in this respect, may and do arise.

3rd. The principal articles of which our imports and exports consist are separated for each fifth year in the same manner as the countries are.

In all these tables we are dealing with the values—necessarily so for the first and second purposes; since the totals can only be obtained by reducing the denominations of weight, measure, &c., in which the goods are taken to account to the common measure of value in pounds sterling; and this being done for the grand total as well as for the amounts to and from the different countries, it is well to show the different articles in the same form. These sums, however, fail fully to show the variations from year to year, because, being founded upon the market prices existing at the time, which are constantly shifting, it is necessary to take such fluctuations into consideration in arriving at a correct judgment as to the real increase or decrease which is taking place. To assist in arriving at right conclusions on this point, there have been added tables, showing the quantities of some of the articles of greatest magnitude, with the percentage of increase for last year over that of the year with which we commence. A comparison of the rates of increase in the value and the quantity of each article will show whether the additional value is due to greater bulk or to higher price.

It should be noticed that one portion of the goods brought to and taken from this country is not included in any of the tables, namely, those which are merely sent hither to find a vessel going to the place for which they are destined, and are transhipped from one ship to another without being landed here. A somewhat rough account is taken of their value (and in many cases the quantities of the articles). This is of some importance, because thus passing into and out of our waters they furnish employment for our ships and men, and its increase is an element of additional mercantile or maritime prosperity.

The whole value of these transhipments during the past twenty years is as follows:—

[000's omitted.]

	£
1854	5,046,
'55	3,583,
'56	4,579,
'57	4,508,
'58	4,494,
'59	6,645,
'60	5,137,
'61	4,420,
'62	4,714,
'63	5,330,
'64	5,989,
1865	6,470,
'66	7,721,
'67	6,656,
'68	7,281,
'69	8,115,
'70	10,941,
'71	11,358,
'72	13,897,
'73	13,764,
'74	not yet published

Before speaking of the general results, it may be expedient, to take the several tables in which these are shown, and point out the nature and peculiarities of each, bearing in mind that the great object of this paper is to draw attention to the disparity between the transactions in the first and the last years of the series selected.

In Table I we find that a total import, valued in 1854 at 152,300,000*l.*, had grown by 1874 to one of 370,000,000*l.*, an increase of 143 per cent., or at the rate of rather more than 7 per cent. per annum; not, indeed, by regular advances, for there are many fluctuations in the rate of progress, the years of greatest increase being 1856, 1860, 1863-64, 1866, 1871, and 1872, those of retrogression being 1855, 1858, 1865, 1867, and 1874. The second column of the table shows the extent to which the goods thus imported were again taken away to other countries, the whole importations during the twenty-one years amounting to 5,340 millions of pounds sterling, and the re-exportations to 860 millions, or about one sixth part. The increase in this branch of trade has been proportionally greater than that of the imports, namely, 209 per cent., or at the rate of 10½ per cent. per annum, and is somewhat more equally distributed. The years in which it has receded being 1858, 1866-67, 1869-70, 1872-73. In 1861 and 1862 there were great steps upwards, and again in 1871, in which the highest point was attained, namely, an advance on its predecessor of 36 and on 1854 of 225 per cent., since when there has been a continuous fall, unless the final figures of last year, which (as explained in a note) are not yet forthcoming, should, as there is reason to believe from those already ascertained, manifest some increase above those given in the monthly account. Deducting the re-exports from the original imports, we should arrive at the value of the goods retained in the country And here the increase is not so great as that of the first receipts, being but 134 per cent. This gives an annual rate of 6⅜ per cent., fluctuating from an increase in 1856 of 21·7 to a decrease in 1858 of 13·6 per cent. on the years immediately preceding. Those in which the greatest rise took place were 1856, 1860, 1864, 1866, and 1872; those of falling off 1855, 1858, 1865, 1867, and 1874.

Table II exhibits similar statements for the exports. The second column—that which shows the foreign and colonial re-exports, being necessarily identical with the same column in Table I. The total increase here has been from 116 millions in 1854 to 297 in 1874, or 156 per cent., giving an average rate of nearly 8 per cent., —a more regular one than in the imports—the greatest range being from an increase in 1863 of 18·5 to a decrease in 1867 of 5·5 per cent. The years of greatest increase were 1856, 1859, 1863-64, 1866, and 1871-72, those of decrease 1858, 1861, 1867, and 1873-74. The whole exports of the twenty-one years amounted to 4,300,000,000*l.*, of which 860 or about one-fifth were re-exportations, leaving 3,400,000,000*l.* as British produce or manufacture. Of these latter the growth has been from 97,000,000*l.* in 1854 to 240,000,000*l.* in 1874, or an average rate of 7⅛ per cent. increase, the irregularities being as great as in the other cases, namely, from a decrease in 1861 from its predecessor of 7·9 to an increase in 1863 of 18·2 per cent., the years of largest growth being 1856, 1859, 1863-64, 1866, 1871-2; those of recedence 1855, 1858, 1861-2, 1867-68, and 1874.

In Table III the total value of the imports for every fifth year is divided into that from our Colonial possessions, and from Foreign countries; and again, between the principal possessions and countries, with the object of showing from whence we draw our supplies, and the variations in our relations with each. To have done this for every year would have taken up too much space, therefore only the percentage of increase in 1874 upon 1854 has been drawn out in the last column. From this table it will appear that the proportion of receipts from our own possessions at present is between one-third and one-fourth of the whole; and that of these India is by far the most liberal contributor to our wants, four-ninths of our colonial supplies being drawn from thence. Australia stands next, with rather more than two-ninths, bidding fair by the rapidity of its increase to distance its elder sister; the one having in the twenty years advanced from 4,300,000*l.* to 18,500,000*l.*, or 330 per cent.; the other from 13,000,000*l.* to 37,500,000*l.*, or 189 per cent. Mauritius and South Africa have advanced by 125 per cent., and our North American possessions by half as much, whilst the West Indies remain almost stationary, the increase being but 4 per cent. Of foreign countries by far the greatest sender, at this time, is the United States, from whom we last year drew to the value of 74,000,000*l.* out of 289,000,000*l.*, or more than one-fourth of the whole. Next to the States comes France with 47,000,000*l.* or one-sixth, then Russia with 21,000,000*l.*, and Germany with 20,000,000*l.* It must be observed, however, that for the reason before alluded to these figures do not altogether accurately represent the relative trade of the different countries. France being credited with the goods from the east which pass through her ports in transit; the United States with some which come from Canada; Holland and Belgium probably with that of Germany. The bulk of that from Egypt is brought from the east, and the imports which used to be landed on one side of the Isthmus and re-shipped on the other now pass in increasing quantities through the Suez Canal.

Table IV serves the same purpose for the exports from the United Kingdom, and here we find a not very different proportion in the relative trade to British and foreign places, from that which we observed in the imports, a total of 297,000,000*l.*, giving

77,000,000*l.* to our colonies. The same countries, too, seem to be our largest purchasers, though not in the same relative degree. India takes 29,000,000*l.* out of the 77,000,000*l.*, and Australia 21,000,000*l.*; but the latter does not advance with anything like the same rapidity as the former, the respective increases in 1874 over 1854 being 56 and 173 per cent. Of the foreign countries, the United States is again one of the largest dealers, 32,000,000*l.*; but Germany outstrips her by more than 2,000,000*l.*, standing at the head of all with 34,500,000*l.* France comes next with 29,000,000*l.* and Holland with 23,000,000*l.*; all these being portions of the 220,000,000*l.* sent to foreign countries in 1874. The total growth since 1854 has been from 116,000,000*l.* to 297,000,000*l.*, or 156 per cent.; British possessions have risen from 36,000,000*l.* to 77,000,000*l.*, and foreign countries from 79,000,000*l.* to 220,000,000*l.*, or 113 and 177 per cent. respectively. The same remark as to the effect of the transit trade applies to these figures as it did to those of the import.

Table V deals with the values of the principal articles for the same years for which the previous table did with the several countries and in the same manner shows the increase in the last year over the first. An attempt has been made to divide the articles into classes, so as to show the different rates of increase; but this is somewhat imperfectly done, from the difficulty of strictly defining to which class certain goods properly belong. First in order stand those which undeniably belong to articles of food, beginning with grain and farinaceous substances, going on to living animals, next to animal products, then to vegetable substances for food and drink, supplemented by the addition of alcoholic liquids and tobacco. It is here that the greatest increase has taken place, for whilst that of the whole imports has been but 143, this has been 165, or including spirits, wine, and tobacco, 151 per cent.; nor does this fully represent the growth in our consumption; for if wheat, which appears to have been exceptionally large in 1854, be left out, the other articles of food will show an excess of fully 200 per cent., or a treble quantity in twenty years. In some the additional receipts are really enormous: thus potatoes are multiplied sixty-fold, eggs eleven, bacon and hams seven, butter and cheese four and five-fold. Tea has more than doubled, and in most of these by far the greatest gain has taken place in the last quinquennial period. Live animals are four times greater than in 1854, but do not keep pace with other articles, for there has been a slight falling off since 1869. Spirits show an actual decline of 6 per cent., being the only article in this class which is less than in 1854; but wine has increased 90 and tobacco 187 per cent.

Next in order are placed the raw materials, which form the staple of our textile fabrics, and by way of contrast, the manufactures from these materials, which are imported in their finished state; the former have increased 130 the latter 250 per cent. The most remarkable growth in the raw material is in jute, an article which may be said to have sprung into existence as one of import at the time of the Russian war, and during the cotton famine to have taken such a hold on our markets as to have increased 540 per cent. On the other hand, silk has during the same period declined 14 per cent. in the raw, but increased 298 per cent. in the manufactured article. Wool likewise has increased, both raw and manufactured, and in each at almost exactly the same rate—248 and 243 per cent. There is this difference, however, that the amount of the raw products is considerable, namely, in 1874, 90,000,000*l.*, in the manufactured only 15,000,000*l.*, the one being nearly a fourth, the other only a twenty-fifth part of our total imports; but in neither does there seem to be any great growth going on, since the imports of both in 1869 are very nearly the same as those of 1874.

The metals, which form a not inconsiderable item of import, viz., 11,000,000*l.* last year, have increased 211 per cent.; lead standing first and iron next. In wood there appears to have been but little alteration in the first four periods, whilst in 1874 it is nearly double that of 1869, the whole increase upon 1854 being 84 per cent. A few other miscellaneous articles are included, in which hides show a growth of 259, and oils a decrease of 4 per cent.

Although numerically, these specified articles do not form a large proportion of our total imports, in value they embrace nearly five-sixths; and may therefore be taken as a fair evidence of the general progress. It is probable that in some points the comparisons may not be strictly accurate, owing to minor alterations in the classification of different descriptions of the same goods, by which the totals given may not always include the same subdivisions. This remark applies more to the arrangement under quantities, which will be found in Tables VIII, IX, and X.

In Table VI the same particulars are given for some of the articles of which the exports form an important consideration. By deducting the values here given from those of the preceding table we may arrive at the amount retained in the country, and shall find that in some articles this is but a small proportion of the quantity brought here for a market in 1874. As examples of this, coffee was imported to the value of rather more than 7,000,000*l.*, of which 5,000,000*l.* were again taken away; rice brought in is valued at 3,600,000*l.*, and taken away to the extent of 2,500,000*l.*; tea came in 11,500,000*l.* and went out 2,500,000*l.*, a much smaller proportion. On the other hand, of nearly 31,000,000*l.* worth of wheat we parted with barely 600,000*l.*; of sugar, to 20,000,000*l.* we parted with but 700,000*l.*; and of cotton, out of 51,000,000*l.* worth, less than 7,000,000*l.* left us.

Table VII is the counterpart of Table V, but dealing with the exports of British produce and manufacture. The articles enumerated are fewer than those of the imports were, although they represent about the same proportion, viz., for 1874 five-sixths, or 203,000,000*l.* out of 240,000,000*l.*, quite sufficient to indicate the general course which the trade has taken. Of these cotton manufactures and yarn together show for 74,000,000*l.*, or about three-eighths of the whole. The increase on these has been to the extent of 134 per cent. Iron and steel come next with 31,000,000*l.*, an increase of 146 per cent., and then woollen manufactures and yarn 28,000,000*l.*; these three branches of manufacture alone furnishing more than half of all our exports, and manifesting an increase of 142 per cent. Coals afford 12,000,000*l.*, linen manufactures 11,000,000*l.*, and silk 3,000,000*l.* towards the total exports of 1874—an increase on 1854 of 460, 113, and 85 per cent. respectively. A remarkable instance of the varied character of our trade is shown in what might have been thought a trivial article of manufacture, namely, empty bags and sacks for packing goods, of which we exported to the value of a quarter of a million pounds in 1854, and one million and three-quarters in 1874.

In all the foregoing tables we have been treating of values alone, and not at all of quantities. This, as before explained, is necessary for the general purposes of comparing one year's transactions, one country's trade, or the dealings in one article, as compared with others; but for ascertaining with anything like precision the advance or otherwise of the several articles through a series of years, it is indispensable that we should consider quantities as well. Indeed, this is the more important of the two, for fluctuations of price whilst very important in regard to questions of profit and loss, whether to the manufacturer, the trader, or the nation, will mislead in attempting to form estimates of the increased production, sale, or consumption of the various articles, whether foreign or British, in which we trade. Three tables have, therefore, been prepared, in which the quantities of the same articles for the same periods, with the like increase of one year over another are displayed, so far as is possible. In many cases it would be impracticable to do so, because the values alone are capable of being registered. This happens also with some articles of which the values are given, as woollen manufactures, which heading includes a number of subdivisions, all capable of being grouped together for a joint value, but not so for a common quantity, because the separate quantities, such as weights and measurements, pieces, or pounds and yards are not capable of being added together. Neither must it be taken that in all cases the values shown for any article are for identically the same parcels of goods as are shown under quantities, as for instance wood, where the value includes staves, firewood and furniture woods, the quantities only those of hewn and sawn; but with such an article as tea, where the value and the quantity are for the same amount of goods, the division of one by the other would give the actual average price per pound in each year.

Table VIII is for the principal articles of import, and they, though much fewer in number, are ranged in the same order as in Table V.

Table IX contains the same details for portions of the foreign and colonial produce re-exported, and Table X for the exports of British goods. In many of these latter the disparity of increase is so great that it may be well to range them side by side, thus:—

	Increase in	
	Value.	Quantity.
	Per cnt.	Per cnt.
Alkali	462	356
Bags empty	562	1,043
Beer and ale	86	40
Coals	462	228
Cotton yarn	117	49
Sugar, refined	463	644
Woollen yarn	257	123

Such are a few of the more noticeable points brought out by an inspection of the several tables, and having, it is hoped, thus far kept within the strict bounds of a statistical paper, I would trespass somewhat upon the time and indulgence of my hearers or readers,—trenching in some measure upon the province of the political economist—to pass in review some of the conclusions at which their consideration may enable us to arrive.

Perhaps the most important feature in the whole is to be found in the enormous increase in the quantities and values of the food, other than that produced in our own country, which we are able to purchase and consume—an increase totally out of keeping with that which has taken place in the population. The estimated number of inhabitants to be fed in 1854 was 27,800,000; in 1874, 32,400,000—a difference of 4,600,000, or 16 per cent.; whereas the supplies of food from abroad, after making due allowance for those re-exported, cannot be taken at less than 150 per cent. more than they were twenty years ago. The reason for this disproportion is two-fold: first, that the production of food at home does not keep pace with the growth of our population; and next, that with increasing means of purchasing food, the quantity consumed by the mass of the people is greater, if not in bulk, yet in value. From the official tables—first, I believe, compiled in 1867—we find that the acreage of land under cultivation for corn and green crops in that year was 16,384,000, and in 1873 almost exactly the same, viz., 16,394,000 acres. At the same periods we had of live stock—

	In 1867.	In 1873.
Cattle	8,731,000	10,154,000
Sheep	33,818,000	33,982,000
Pigs	4,221,100	3,564,000
The population having been	30,335,000	32,125,000

Except, therefore, to the extent to which improved methods of cultivation had increased the productiveness of the soil, it does not appear that in these six years there had been any substantial addition to the quantity of food grown at home. If this be so, the supplies needed for the additional mouths must have been chiefly drawn from abroad. This might probably account for a large portion of the increased value within that period, but not for the 30 to 35 millions which have since 1869 been added to our annual payments for food; and hence it is evident, as indeed other circumstances prove, that there must be greater purchasing power in some or every portion of the community. That both the causes alluded to are in operation is also manifest from the unequal rate at which, in proportion to the population, the increase of consumption goes on in articles of which part is produced at home and part obtained from abroad, and in those derived from the latter source alone. Wheat, bacon, butter, cheese, eggs, have all risen with far greater rapidity than sugar, tea, tobacco, and wine. What we have to provide by foreign importations of the first class, is the excess over previous consumption of both home and foreign produce. Of the latter, over foreign alone, and the percentage of increase should for the former class be calculated not upon the importations of 1854, but upon these added to the quantities raised at home.

The contrast between the variations of price in different classes of food is very marked. Take potatoes for one: the increase in value is sixty-fold, in quantity but thirty-three-fold, showing that the price we now pay for the same weight is nearly double what it was twenty years back—in 1854 barely 3*s.* per cwt., in 1874 more than 5*s.* per cwt. Wheat, however, which has increased 158 per cent. in quantity, is only 97 per cent. greater in value. So with rice: 421 in weight only makes 268 in value. On the other hand, butter, cheese, bacon, eggs, lard, are all dearer than they were in 1854; in eggs especially, we see that whilst the number is eight times, the value is eleven times as great; all tending to show that though grain —which is the produce of countries in all parts of the world—is cheaper, meat, dairy produce and those articles for which we are limited to places near at hand, have risen so much in cost, that practically the necessaries of life are dearer than they were in the year with which our observations commence.

A very satisfactory indication is furnished by the growing addition to our employment of the raw materials which form the staple of our textile manufactures, and in the metals which are so largely worked up and sent away as British manufactures, as well as in wood, hides, seeds, &c. Turning to the exports of British manufactures, we find the same results, the increase being very general; cotton, linen, and woollen manufactures having all more than doubled both in value and quantity, keeping pace with the larger importations of the raw materials from which they are produced. Here again the increase is more than commensurate with that of the population, showing that if the average consuming power is raised, so also is that of producing and manufacturing. Must not this be due to the extended employment and the superior character of our machinery, through which a far larger amount of material is worked up by each hand; otherwise such an extension of our manufactures could not possibly have taken place?

There are several points of great interest connected with the different countries with which we have the largest trading relations and the progressive growth of these. We must leave Russia out of the question in comparing the two years we have chosen, because of the Crimean War in 1854; but the fact of her now sending us nearly twice as much as she takes from us shows the extent to which she has served as a granary for the United Kingdom. The same cause produces the same result with regard to France, and in some degree the United States. On the other hand, Germany and Holland are both better customers to us than we are to them. The disproportion between the imports from, and the exports to several countries are so remarkable, that they deserve to be placed in contrast. First, those in which our imports are now in excess.

[000's omitted.]

	1874.	
	Imports.	Exports.
	£	£
Russia	21,404,	11,800,
Sweden and Norway	10,978,	7,300,
Belgium	14,937,	12,900,
France	46,692,	29,400,
Spain	12,850,	7,700,
United States	74,109,	32,300,

Then those in which the exports are greater:—

[000's omitted.]

	Imports.	Exports.
	£	£
Germany	19,973,	34,500,
Holland	15,810,	22,600,

On the whole it will be seen that our imports are now 370,000,000*l.* against exports of 297,000,000*l.* In olden times this would have been thought a serious evil. It was at one time considered that the country which received goods to a greater value than it returned must inevitably become impoverished. A different theory then arose. It was thought that no country (not being one in which the precious metals existed,) could go on paying in goods more than it got back, and therefore it must be taken that in some way or other the exports, though smaller in amount, did in fact meet the claims upon us for the larger imports. Consequently that the disparity between the two was a source of congratulation, since the excess of value in the one over the other was really so much wealth accruing to us as the balance of our trading operations. To a certain—perhaps a considerable—extent this was true. The export values being fixed at the time of shipment, did not represent the charges of transit or the profits to those who shipped them; whilst the import values being those at the time of arrival, did include the expense of bringing them and the profit on their sale by the first importers, most or all of which accrued to this country as being the greatest carrier both out and home, as well as the depôt in which they were sold. Such an explanation, however, cannot serve to account for so large a difference as now exists. This to the minds of many can only be accounted for in one of two ways: either that there is some error in the method by which the values are ascertained, or that we are really doing a business which is alarming in its tendency towards ultimate bankruptcy. But surmises and fears like these may well be dismissed, and the belief that the difference is really an accession to the accumulated wealth of the country fully entertained.

It is obvious that for years past there has been an annual increase not only in the capital devoted to reproductive expenditure which, when it is judiciously devoted to this purpose, goes on increasing in the way of compound interest; but also in that which seeks investment abroad. That a large amount of capital thus supports foreign loans, makes railways, and likewise maintains gas, water, harbour, and other companies is well understood; but it is almost impossible to form an estimate of the annual return it makes in the shape of interest or dividends. Beyond this, however, there is reason to believe that considerable sums are invested in private agricultural and manufacturing undertakings, as well as employed in trading pursuits. What more likely than that the manufacturer at home, who finds the demands of labour interfere with his ability to gain an adequate return for his capital here, should carry some of it to like uses abroad? Or that the merchant who desires to draw consignments of foreign or colonial produce to his establishments at home; should advance the money which pays for the cultivation of the soil and the gathering in of the produce; should build or charter the ships, not only those which are employed in the direct trade, but in the coast or international carrying in distant countries? It is well known that on this system the cultivation of our West Indian colonies was carried on so largely when slavery existed there, that in this way the Northern States of the Union in America reaped the profits of slavery in the Southern; and there is no doubt that scarcely a country exists, or cultivation or manufacture carried on in any part of the world, in which British capital or British skill, which is paid for in money value beyond the cost of its maintenance, has not its share. Now, all this is in reality carried on more by credit than the actual transmission of money, but it nevertheless brings in large profits which in one shape or another must be remitted to this country. And why not in goods for which no equivalent exportation is made? This will go on in an accelerated ratio so that it is not absolutely impossible to conceive that the time may come when the imports we receive will not do more than represent the returns made for the use of British capital and credit. The recipients of these returns have but to consume the produce of our home growth and labour, in reality paying for them with the goods drawn from abroad; and thus manufactures might flourish and prosperity exist without a single article of export ever being made. The true interest of the capitalist at home, who finds that either there is a superabundance of that which he has to employ, or that the conditions of the labour market here prevent his obtaining an adequate return, seems to be, to seek elsewhere to stimulate production, or to encourage trade in distant places; himself directing from hence their proper developments, and enjoying here the fruits of his means and his talents.

Still the question arises on the face of these figures, whether in truth the trade of the kingdom has not received a decided check. It will be seen that 1871-72-73 were the years in which it seemed to have reached its highest point, and that 1874 contrasts unfavourably in every particular. The percentages of increase which in the former years had reached, for imports retained 136, for exports of foreign goods 225, and of British 164 per cent., have in the last receded to 156, 209, and 146 respectively. The four months* of the present year manifest a considerable decline upon the corresponding period of last year, and would thus evidence that the diminishing process is still going on. Time alone will show whether this is one of those cycles of comparative stagnation from which we have often before recovered, or whether the conditions which regulate the relations of capital and labour to each other have not really so changed that we are transferring our superiority to other lands. Enough, however, has been said to show the enormous strides which British commerce and manufacture has made within the last twenty years. We may yet indulge the hope that our prosperity not having reached its climax, will shortly manifest as great a revival as we have often witnessed before, and will in future years attain still greater magnitude, if not with quite as rapid a growth as hitherto has rewarded our national enterprise, wealth, and skill.

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* Imports in 1874, 123,915,925*l.*; in 1875, 119,549,154*l.* Exports (British) in 1874, 77,234,354*l.*; in 1875, 73,282,069*l.*

APPENDIX.

Table I.—*Total Value of Goods Imported into the United Kingdom, and of those Re-Exported therefrom in each Year from* 1854 *to* 1874, *with the Increase or Decrease per Cent. in each on the previous Year, and also on* 1854.

[000's omitted.]

Year.	Imported.			Re-Exported.			Retained for Home Consumption.		
	[000's omitted].	Increase or Decrease.		[000's omitted.]	Increase or Decrease.		[000's omitted].	Increase or Decrease.	
		Per Year.	On 1854.		Per Year.	On 1854.		Per Year.	On 1854.
	£	Per cnt.	Per cnt.	£	Per cnt.	Per cnt.	£	Per cnt.	Per cnt.
1854	152,389,	—	—	18,636,	—	—	133,753,	—	—
'55	143,543,	− 5·7	− 5·7	21,003,	+12·7	+ 12·7	122,540,	− 8·4	− 8·4
'56	172,544,	+20·2	+ 13·2	23,393,	+11·4	+ 25·5	149,151,	+21·7	+ 11·5
'57	187,844,	+ 8·4	+ 23·3	24,108,	+ 3·0	+ 29·4	163,736,	+ 9·8	+ 22·4
'58	164,584,	−12·4	+ 7·9	23,174,	− 3·9	+ 24·4	141,410,	−13·6	+ 5·7
'59	179,182,	+ 8·8	+ 17·6	25,281,	+ 9·1	+ 35·7	153,901,	+ 8·8	+ 15·1
1860	210,531,	+17·5	+ 38·1	28,630,	+13·2	+ 53·7	181,901,	+18·1	+ 36·0
'61	217,485,	+ 3·3	+ 42·7	34,530,	+20·6	+ 85·4	182,955,	+ 0·6	+ 36·8
'62	225,717,	+ 3·9	+ 48·1	42,176,	+22·1	+126·5	183,541,	+ 0·3	+ 37·2
'63	248,919,	+10·0	+ 63·3	50,300,	+19·2	+170·0	198,619,	+ 8·2	+ 48·5
'64	274,952,	+10·6	+ 80·4	52,139,	+ 3·7	+180·0	222,813,	+12·2	+ 66·6
1865	271,072,	− 1·4	+ 77·9	52,996,	+ 1·6	+184·7	218,076,	− 2·1	+ 63·0
'66	295,290,	+ 9·0	+ 93·8	49,988,	− 5·7	+168·0	245,302,	+12·5	+ 83·4
'67	275,183,	− 6·8	+ 80·6	44,841,	−10·3	+140·9	230,342,	− 6·1	+ 72·2
'68	294,694,	+ 7·1	+ 93·4	48,101,	+ 7·3	+158·4	246,593,	+ 7·5	+ 84·3
'69	295,460,	+ 0·3	+ 93·9	47,061,	− 2·2	+152·8	248,399,	+ 0·8	+ 85·7
1870	303,257,	+ 2·6	+ 99·0	44,494,	− 5·5	+139·0	258,763,	+ 4·2	+ 93·4
'71	331,015,	+ 9·2	+117·2	60,509,	+35·9	+225·1	270,506,	+ 4·5	+102·2
'72	354,694,	+ 7·2	+132·7	58,332,	− 3·6	+213·4	296,362,	+ 9·5	+121·6
'73	371,287,	+ 4·7	+143·6	55,840,	− 4·3	+200·0	315,447,	+ 6·5	+135·8
'74	*370,225,	− 0·3	+142·9	57,500,†	+ 3·0	+208·6	312,725,	− 0·9	+133·8
Total 21 years	5,339,867,	—	—	863,032,	—	—	4,476,835,	—	—
Average	254,279,	—	—	41,097,	—	—	213,182,	—	—

* These figures are taken from the monthly trade returns, and may be subject to some correction when the accounts for the year are issued in their final form.

† The total exports of foreign and colonial produce are not yet published. The sum here given is an estimate on the basis of last year's total, and this year's statements of the principal articles.

TABLE II.—*Value of Goods Exported from the United Kingdom, distinguishing those of Foreign and Colonial Produce, and those of British Manufacture, in each Year from* 1854 *to* 1874, *with the Increase or Decrease per Cent. in each Year, on that of its predecessor, and also on* 1854.

[000's omitted.]

Year.	Exported.			Foreign and Colonial.			British.		
	[000's omitted].	Increase or Decrease.		[000's omitted].	Increase or Decrease.		[000's omitted].	Increase or Decrease.	
		Per Year.	On 1854.		Per Year.	On 1854.		Per Year.	On 1854.
	£	Per cnt.	Per cnt.	£	Per cnt.	Per cnt.	£	Per cnt.	Per cnt.
1854	115,821,	—	—	18,636,	—	—	97,185,	—	—
'55	116,691,	+ 0·7	+ 0·7	21,003,	+12·7	+ 12·7	95,688,	− 1·5	− 1·5
'56	139,220,	+19·0	+ 20·2	23,393,	+11·4	+ 25·5	115,827,	+21·0	+ 19·2
'57	146,174,	+ 5·0	+ 26·2	24,108,	+ 3·0	+ 29·4	122,066,	+ 5·4	+ 25·6
'58	139,783,	− 4·4	+ 20·2	23,174,	− 3·9	+ 24·4	116,609,	− 4.5	+ 20·0
'59	155,693,	+11·4	+ 34·4	25,281,	+ 9·1	+ 35·7	130,412,	+11·8	+ 34·2
1860	164,521,	+ 5·7	+ 42·1	28,630,	+13·2	+ 53·7	135,891,	+ 4·2	+ 40·0
'61	159,632,	− 3·0	+ 37·7	34,530,	+20·6	+ 85·4	125,102,	− 7·9	+ 28·7
'62	166,168,	+ 4·1	+ 43·5	42,176,	+22·1	+126·5	123,992,	− 0·9	+ 27·6
'63	196,902,	+18·5	+ 70·0	50,300,	+19·2	+170·0	146,602,	+18·2	+ 50·8
'64	212,588,	+ 7·9	+ 83·4	52,139,	+ 3·7	+180·0	160,449,	+ 9·4	+ 65·1
1865	218,832,	+ 2·9	+ 88·9	52,996,	+ 1·6	+184·7	165,836,	+ 3·4	+ 70·6
'66	238,906,	+ 9·1	+106·3	49,988,	− 5·7	+168·0	188,918,	+13·9	+ 94·3
'67	225,803,	− 5·5	+ 94·9	44,841,	−10·3	+140·9	180,962,	− 4·2	+ 86·2
'68	227,778,	+ 0·9	+ 96·7	48,101,	+ 7·3	+158·4	179,677,	− 0·7	+ 84.9
'69	237,015,	+ 4·0	+104·7	47,061,	− 2·2	+152·8	189,954,	+ 5·7	+ 95·4
1870	244,081,	+ 3·0	+110·8	44,494,	− 5·6	+139·0	199,587,	+ 5·1	+105·3
'71	283,575,	+16·2	+144·9	60,509,	+35·9	+225·1	223,066,	+11·8	+129·5
'72	314,589,	+10·9	+171·6	58,332,	− 3·6	+213·4	256,257,	+14·9	+163·6
'73	311,005,	− 1·1	+168·6	55,840,	− 4·3	+200·0	255,165,	− 0·4	+162·5
'74	* 296,936,	− 4·5	+156·4	* 57,500,	+ 3·0	+208·6	* 239,436,	− 6·2	+146·3
Total 21 years	4,311,713,	—	—	863,032,	—	—	3,448,681,	—	—
Average	205,319,	—	—	41,097,	—	—	164,222,	—	—

* The notes on Table I will apply to this table and all the figures given for 1874.

TABLE III.—*Total Value of Imports into United Kingdom from Principal Countries in the Years* 1854, 1859, 1864, 1869, *and* 1874, *distinguishing British Possessions from Foreign Countries, and showing the Increase per Cent. in the Last Year of the Series over the First.*

[000's omitted.]

Country from which Imported.	1854.	1859.	1864.	1869.	1874.	Increase
	£	£	£	£	£	Per cnt.
British North America	7,192,	5,474,	6,851,	7,735,	11,772,	64·
West Indies	6,181,	5,678,	9,447,	6,175,	6,401,	4·
Australia	4,302,	5,835,	10,039,	12,147,	18,519,	330·
East Indies	12,974,	18,007,	57,539,	39,308,	37,478,	189·
Mauritius and S. Africa	2,369,	3,324,	3,566,	3,393,	5,333,	125·
Other	1,131,	1,156,	3,420,	1,376,	1,871,	65·
Total British possessions	34,149,	39,474,	90,862,	70,134,	81,374,	138·
Russia	4,252,	13,548,	14,713,	16,675,	21,404,	403·
Sweden and Norway	3,879,	3,530,	5,099,	6,354,	10,978,	180·
Denmark*	2,808,	2,648,	1,844,	2,301,	3,903,	39·
Germany	16,294,	10,489,	15,150,	18,354,	19,973,	23·
Holland*	6,996,	7,053,	11,766,	13,059,	15,810,	126·
Belgium	3,631,	3,533,	6,411,	9,391,	14,937,	311·
France*	10,597,	16,900,	25,896,	33,662,	46,692,	341·
Portugal*	2,487,	1,803,	2,739,	3,407,	4,696,	89·
Spain*	7,825,	7,727,	13,194,	13,090,	12,850,	64·
Italy	2,370,	2,583,	2,693,	3,998,	3,599,	52·
Turkish dominions	2,775,	3,821,	6,306,	9,060,	6,579,	137·
Egypt	3,356,	8,572,	19,602,	16,796,	10,468,	212·
United States	29,795,	34,294,	17,924,	42,573,	74,109,	148·
Brazil	2,084,	2,829,	7,021,	7,312,	7,020,	237·
Chili	1,381,	1,970,	3,162,	3,635,	4,693,	240·
Peru	3,139,	1,645,	2,655,	3,992,	4,490,	43·
China and Hong Kong	9,125,	9,014,	15,549,	9,903,	11,916,	31·
Other	5,446,	7,749,	12,366,	11,764,	14,734,	171·
Total foreign	118,240,	139,708,	184,090,	225,326,	288,851,	144·
Total	152,389,	179,182,	274,952,	295,460,	370,225,	143·

* Including colonial possessions.

TABLE IV.—*Total Value of Exports from United Kingdom to Principal Countries in the Years* 1854, 1859, 1864, 1869, *and* 1874, *distinguishing British Possessions from Foreign Countries, and showing the Increase per Cent. in the Last Year of the Series over the First.*

[000's omitted.]

Country to which Exported.	1854.	1859.	1864.	1869.	1874.*	Increase
	£	£	£	£	£	Per cnt.
British North America	5,481,	3,966,	6,268,	5,910,	10,200,	86·
West Indies	2,213,	2,387,	4,089,	2,926,	3,700,	67·
Australia	13,405,	12,495,	12,924,	14,382,	20,800,	56·
East Indies	10,575,	22,937,	24,629,	21,168,	28,900,	173·
Mauritius and S. Africa	1,386,	2,627,	3,055,	2,043,	5,200,	275·
Other	3,314,	3,228,	3,013,	3,208,	8,600,	160·
Total British possessions	36,374,	47,640,	53,928,	49,637,	77,400,	113·
Russia	74,	6,359,	6,086,	9,654,	11,300,	
Sweden and Norway	1,093,	1,424,	2,249,	2,503,	7,300,	568·
Denmark	1,032,	1,611,	2,222,	2,271,	3,300,	220·
Germany	13,106,	16,059,	24,824,	32,072,	34,500,	163·
Holland	7,602,	9,353,	15,019,	19,504,	22,600,	197·
Belgium	3,354,	3,703,	5,980,	8,913,	12,900,	285·
France	6,418,	9,600,	23,860,	23,340,	29,400,	358·
Portugal	1,659,	1,795,	2,759,	2,297,	3,500,	111·
Spain	3,086,	4,720,	8,007,	5,100,	7,700,	153·
Italy	2,691,	4,392,	6,985,	7,240,	7,500,	178·
Turkish dominions	3,093,	4,808,	7,899,	8,258,	8,900,	188·
Egypt	1,367,	2,547,	6,196,	8,073,	3,600,	163·
United States	22,333,	24,418,	20,172,	26,788,	32,300,	45·
Brazil	3,011,	3,841,	6,369,	7,121,	8,000,	166·
Chili	1,466,	1,510,	1,720,	2,044,	2,900,	98·
Peru	971,	896,	1,355,	1,430,	1,800,	86·
China and Hong Kong	1,026,	4,587,	4,988,	9,241,	8,800,	758·
Other	6,115,	6,430,	12,020,	11,529,	13,300,	126·
Total foreign	79,447,	108,053	158,660,	187,378,	220,100,	177·
Total	115,821,	155,693,	212,588,	237,015,	297,500,	157·

* Partly estimated, that is so far as goods of foreign production are included.

TABLE V.—*Total Value of Principal Articles Imported into the United Kingdom in each of the Years* 1854, 1859, 1864, 1869, *and* 1874, *showing the Increase per Cent. in the Last of those Years over the First.*

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase or Decrease
	£	£	£	£	£	Per cnt.
Corn, wheat and wheat flour	15,664,	11,106,	13,507,	23,309,	30,911,	+ 97·
„ other kinds and meal	6,096,	6,936,	6,374,	14,043,	19,842,	225·
Rice	983,	819,	1,821,	2,837,	3,622,	268·
Potatoes	17,	101,	143,	393,	1,036,	5,994·
Oxen, sheep, and swine	1,449,	1,635,	4,276,	5,299,	5,264,	263·
Fish	140,	242,	432,	631,	793,	466·
Meat and poultry	796,	896,	1,184,	1,421,	2,592,	226·
Bacon and hams	892,	289,	2,293,	2,432,	5,900,	561·
Eggs	229,	337,	835,	1,127,	2,431,	961·
Butter	2,171,	2,080,	5,653,	6,923,	9,053,	317·
Cheese	906,	1,039,	2,176,	3,084,	4,484,	395·
Lard	707,	258,	490,	931,	885,	25·
Fruit	1,302,	2,666,	2,634,	3,577,	*4,500,	246·
Sugar	10,776,	12,552,	16,471,	15,947,	20,181,	87·
Cocoa	75,	151,	234,	321,	529,	605·
Coffee	1,575,	1,956,	3,606,	4,928,	7,103,	351·
Chicory	15,	125,	57,	38,	78,	420·
Tea	5,541,	5,813,	9,439,	10,311,	11,573,	109·
	49,334,	49,001,	71,625,	97,552,	130,777,	165·
Spirits	2,791,	2,373,	2,275,	2,107,	2,612,	− 6·
Wine	3,616,	2,781,	5,003,	5,266,	6,868,	+ 90·
	6,407,	5,154,	7,278,	7,373,	9,480,	+ 48·
Tobacco	1,349,	1,817,	3,449,	2,265,	3,875,	+ 187·
Cotton	20,308,	34,560,	78,459,	56,956,	50,937,	151·
Flax	3,417,	3,769,	5,323,	4,197,	5,545,	62·
Hemp	1,831,	1,572,	1,769,	1,940,	2,211,	21·
Jute	554,	790,	2,250,	2,226,	3,561,	543·
Silk	6,536,	10,904,	6,789,	7,947,	5,630,	− 14·
Wool	6,499,	9,827,	15,503,	14,697,	22,640,	248·
	39,145,	61,422,	110,093,	87,963,	90,524,	131·
Manufactures of cotton	691,	683,	834,	1,181,	1,483,	115·
„ linen	79,	127,	283,	166,	200,*	153·
„ silk	2,365,	2,763,	7,620,	11,909,	9,405,	298·
„ wool	1,172,	925,	1,850,	2,535,	4,023,	243·
	4,307,	4,498,	10,587,	15,791,	15,111,	251·

* Estimated.

TABLE V.—*Total Value of Principal Articles Imported—Contd.*

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase or Decrease
	£	£	£	£	£	Per cnt.
Copper	1,801,	3,034,	4,375,	4,264,	4,916,	174·
Iron	551,	595,	1,131,	1,288,	2,517,	357·
Lead	255,	504,	611,	964,	1,537,	503·
Quicksilver	254,	295,	512,	224,	841,	231·
Tin	267,	370,	497,	670,	904,	239·
Zinc	482,	656,	720,	409,	498,	2·
	3,610,	5,454,	7,846,	7,819,	11,208,	211·
Wood	11,859,	10,141,	13,007,	11,945,	21,830,	84·
Hides	1,899,	3,385,	3,152,	3,311,	6,815,	259·
Indigo	1,670,	1,929,	2,248,	3,195,	2,153,	29·
Oils	4,963,	4,889,	5,218,	5,681,	4,778,	— 4·
Seeds	3,503,	5,319,	6,353,	7,011,	*8,000,	+ 128·
Tallow	2,348,	2,933,	2,078,	2,793,	2,318,	— 1·
	14,383,	18,455,	19,049,	21,991,	24,064,	67·
	130,394,	155,942,	242,934,	252,699,	306,869,	135·

* Estimated.

TABLE VI.—*Total Value of Principal Articles of Foreign and Colonial Produce Specified in the foregoing Table of Imports, Exported from the United Kingdom in each of the Years* 1854, 1859, 1864, 1869, *and* 1874, *showing the Increase per Cent. in* 1874 *over that of* 1854.

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase.
	£	£	£	£	£	Per cnt.
Wheat and flour	362,	33,	44,	42,	593,	64·
Rice	567,	645,	952,	974,	2,535,	347·
Sugar	546,	441,	606,	395,	688,	26·
Cocoa	22,	66,	78,	125,	186,	745·
Coffee	764,	877,	2,590,	3,642,	5,161,	576·
Tea	559,	498,	2,095,	2,507,	2,551,	356·
Spirits	1,032,	707,	523,	465,	585,	— 43·
Wine	700,	713,	676,	617,	812,	16·
Tobacco	611,	525,	851,	645,	773,	26·
Cotton	2,302,	4,218,	20,880,	11,511,	6,844,	197·
Flax	53,	68,	191,	94,	286,	440·
Hemp	50,	68,	140,	128,	206,	312·
Jute	5,	14,	298,	359,	604,	11,980·
Silk	1,349,	2,610,	4,969,	3,681,	2,986,	121·
Manufactures of cotton	158,	118,	209,	245,	222,	41·
Iron bars	55,	118,	149,	192,	365,	564·
Quicksilver	90,	218,	318,	232,	652,	624·
Indigo	1,203,	1,754,	1,701,	2,240,	1,639,	36·
Tallow	9,	19,	59,	106,	150,	1,566·
	10,437,	13,910,	37,324,	28,200,	27,838,	167·

TABLE VII.—*Total Value of Principal Articles of British Produce and Manufacture Exported in each of the Years* 1854, 1859, 1864, 1869, *and* 1874, *showing the Increase in* 1874 *over that of* 1854.

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase.
	£	£	£	£	£	Per cnt.
Alkali	463,	1,023,	916,	1,379,	2,602,	462·
Apparel	2,266,	2,183,	2,579,	2,392,	3,197,	41·
Arms and ammunition	442,	624,	994,	1,206,	1,763,	299·
Bags and sacks, empty	265,	330,	749,	946,	1,753,	562·
Beer and ale	1,315,	2,116,	1,842,	1,893,	2,451,	86·
Chemical products	not stated	535,	900,	1,145,	2,112,	295·
Coal and coke	2,127,	3,270,	4,166,	5,068,	11,954,	462·
Copper	1,651,	2,452,	3,665,	3,330,	3,154,	91·
Cotton yarn	6,691,	9,458,	9,083,	14,095,	14,516,	117·
„ manufactures	25,054,	38,744,	45,799,	53,022,	59,716,	138·
Earthenware and china	1,306,	1,314,	1,422,	1,828,	1,743,	33·
Haberdashery	3,678,	4,290,	4,798,	4,585,	6,131,	67·
Hardware	3,868,	3,809,	4,114,	3,737,	4,418,	14·
Iron and steel	12,713,	13,836,	14,573,	22,342,	31,225,	146·
Leather manufactures	1,504,	2,019,	2,408,	2,631,	3,546,	136·
Linen yarn	945,	1,675,	2,992,	2,459,	1,963,	108·
„ manufactures	4,108,	4,604,	8,173,	7,543,	8,792,	114·
Machinery	1,931,	3,731,	4,849,	5,119,	9,771,	406·
Silk yarn	466,	792,	854,	1,150,	1,030,	121·
„ manufactures	1,227,	1,562,	1,461,	1,110,	2,100,	71·
Sugar, refined	218,	342,	200,	550,	1,227,	463·
Woollen yarn	1,558,	3,084,	5,417,	5,538,	5,559,	257·
„ manufactures	9,121,	12,054,	18,533,	22,670,	22,795,	150·
	83,452,	113,847,	140,487,	165,738,	203,513,	144·

TABLE VIII.—*Total Quantities of Principal Articles Imported into the United Kingdom in each of the Years* 1854, 1859, 1864, 1869, *and* 1874, *showing the Percentage of Increase in the Last of those Years over the First.*

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase
						Per cnt.
Corn, wheat, and wheat flour.... cwts.	18,514,	20,665,	27,709,	43,097,	47,709,	158·
Rice .... ,,	1,343,	1,450,	3,188,	5,320,	7,003,	421·
Potatoes................ ,,	116,	589,	742,	1,660,	3,991,	3,341·
Animals Alive—						
Oxen .... No.	114,	86,	232,	220,	194,	70·
Sheep................ ,,	183,	251,	496,	710,	759,	315·
Bacon and hams cwts.	424,	107,	1,069,	740,	2,542,	500·
Eggs .... gt. hund.	709,	1,239,	2,794,	3,685,	5,672,	700·
Butter .... cwts.	483,	426,	1,055,	1,259,	1,621,	236·
Cheese .... ,,	389,	407,	835,	979,	1,488,	283·
Lard .... ,,	275,	94,	217,	256,	375,	36·
Currants .... ,,	120,	558,	764,	944,	968,	707·
Raisins .... ,,	287,	429,	327,	398,	505,	76·
Sugar .... ,,	10,541,	9,927,	12,299,	13,088,	17,228,	63·
Cocoa .... lbs.	5,258,	6,007,	7,920,	13,046,	17,854,	240·
Coffee.................... cwts.	594,	583,	975,	1,550,	1,414,	138·
Chicory .... ,,	30,	267,	136,	84,	125,	317·
Tea........................ lbs.	85,792,	75,077,	124,359,	139,223,	161,603,	88·
Spirits .... gals.	11,915,	12,534,	11,537,	11,396,	13,783,	16·
Wine .... ,,	10,878,	8,196,	15,452,	17,184,	18,274,	68·
Tobacco .... lbs.	35,213,	50,671,	67,621,	55,061,	82,336,	134·
Cotton, raw .... cwts.	7,923,	10,946,	7,976,	10,907,	14,062,	77·
Flax .... ,,	1,303,	1,432,	1,843,	1,542,	2,374,	82·
Hemp .... ,,	1,228,	1,099,	1,024,	1,056,	1,241,	1·
Jute .... ,,	482,	1,061,	2,025,	2,468,	4,299,	792·
Silk........................ lbs.	10,739,	12,579,	8,515,	5,833,	6,063,	− 44·
Wool .... ,,	106,122,	133,285,	206,473,	258,462,	342,987,	223·
Copper ore and regulus........... tons	57,	84,	93,	111,	76,	33·
Iron, unwrought .... ,,	42,	43,	54,	68,	74,	76·
Lead .... ,,	12,	24,	31,	53,	62,	417·
Quicksilver .... lbs.	2,536,	3,160,	4,763,	2,527,	2,998,	18·
Tin .... cwts.	45,	54,	98,	109,	184,	309·
Zinc .... ,,	20,	30,	31,	20,	22,	10·
Wood, deals and hewn	2,507,	2,644,	3,500,	3,934,	6,253,	149·
Hides, raw........... cwts.	601,	862,	955,	865,	1,266,	111·
Indigo .... ,,	70,	63,	76,	87,	86,	23·
Tallow .... ,,	750,	1,074,	1,015,	1,232,	1,155,	54·

Table IX.—*Total Quantities of some of the Principal Articles of Foreign and Colonial Produce Exported from the United Kingdom in each of the Years* 1854, 1859, 1864, 1869, *and* 1874, *showing the Increase Per Cent. in* 1874 *over that of* 1854.

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase.
						Per Cnt.
Wheat and flour cwts.	428,	59,	81,	78,	832,	94·
Rice .... ,,	804,	1,155,	1,679,	1,826,	4,123,	413·
Sugar .... ,,	517,	345,	464,	328,	592,	14·
Cocoa .... lbs.	1,573,	2,819,	2,968,	4,980,	7,732,	392.
Coffee .... cwts.	291,	264,	708,	1,144,	1,065,	266·
Tea .... lbs.	8,656,	6,419,	27,545,	33,899,	30,959,	258·
Spirits .... gls.	4,584,	4,106,	3,962,	3,555,	3,368,	— 27·
Wine .... ,,	2,101,	2,133,	2,085,	1,979,	1,651,	— 21·
Tobacco .... lbs.	13,759,	12,681,	17,828,	16,127,	17,790,	29·
Cotton .... cwts.	1,101,	1,564,	2,185,	2,449,	2,312,	110·
Flax .... ,,	18,	26,	68,	34,	43,	138·
Hemp .... ,,	24,	48,	80,	70,	125,	421·
Jute .... ,,	4,	18,	270,	414,	717,	17,825·
Silk .... lbs.	1,714,	2,575,	4,351,	3,085,	2,764,	61·
Iron bars .... tons.	4,	9,	13,	21,	25,	525·
Quicksilver .... lbs.	900,	2,336,	2,962,	2,622,	2,422,	169·
Indigo .... cwts.	51,	58,	58,	61,	61,	20·
Tallow .... ,,	3,	7,	29,	46,	78,	2,500·

Table X.—*Total Quantities of some of the Principal Articles of British Produce and Manufacture Exported from the United Kingdom in each of the Years* 1854, 1859, 1864, 1869, *and* 1874, *showing the Percentage of Increase in the Last Year of the Series over the First.*

[000's omitted.]

Articles.	1854.	1859.	1864.	1869.	1874.	Increase.
						Pr. ct.
Alkali ....cwts	1,100,	2,030,	2,193,	3,514,	5,011,	356·
Ammunition, gunpowder lbs.	8,715,	10,523,	15,428,	15,454,	14,788,	70·
Bags, empty .... doz.	413,	671,	972,	2,376,	4,722,	1,043·
Beer and ale .... brls.	399,	614,	499,	495,	559,	40·
Coals and coke. tons.	4,309,	7,007,	8,750,	10,745,	13,909,	223·
Copper ....cwts	274,	455,	738,	906,	709,	159·
Cotton yarn .... lbs.	147,128,	192,207,	75,678,	168,841,	220,599,	49.
,, manufactures yds.	1,692,899,	2,562,545,	1,751,989,	2,868,630,	3,603,348,	113·
Iron ....tons.	1,175,	1,465,	1,503,	2,675,	2,487,	112·
Linen yarn .... lbs.	17,697,	27,290,	40,177,	34,570,	42,661,	141·
,, manufactures yds.	111,649,	138,120,	210,468,	214,793,	195,161,	75·
Sugar, refined .cwts	125,	120,	120,	304,	931,	644·
Wool, sheeps.... lbs.	12,901,	9,054,	7,320,	12,410,	10,047,	— 22·
,, yarn .... ,,	15,680,	22,849,	31,824,	37,186,	35,000,	123·

DISCUSSION *on* MR. STEPHEN BOURNE'S PAPER.

MR. W. NEWMARCH, F.R.S., said that the paper read by Mr. Bourne, was one of a kind which the Society had always been exceedingly anxious to cultivate and were never backward in appreciating. The twenty years included in the paper were in many respects the most important and interesting which had ever occurred in the history of the foreign trade of this country. In 1854, at the beginning of the period, those great radical changes which it was the policy of this country to introduce into its foreign trade had been to a very large extent accomplished, in fact it might safely be said that in 1854 the free trade policy commenced in this country by Sir Robert Peel had been carried almost to the point of completion. The great reforms of Mr. Gladstone in 1853 had become law, and in 1854 very little remained to be done in the entire adoption by this country of a free trade policy. Beyond that the gold discoveries which commenced in 1848, by 1854 had begun to exert a real and substantial influence on the foreign trade not only in this country but in most countries of the world. So far as regards one set of causes, these causes were chiefly economical. But there was another set of causes to which he would be disposed to attribute as much influence as to those economical causes to which he had referred. Throughout the whole twenty years there had been in operation, as regards the old commerce of the world, a series of causes of which there was hardly any example during the twenty-five or thirty years preceding 1854. He referred to the prevalence of wars not only in Europe but in all the important countries of the world, the prevalence of periods of scarcity and the occurrence of events which had most materially interfered with the supply and demand of large quantities of those important commodities which had been included by Mr. Bourne in his tables. One of these events was the occurrence of the cattle plague, not only in our own country but in those parts of Europe and other parts of the world from which we were in the habit of deriving our supplies of animal food. There had also been a succession of exceedingly unfavourable harvests not only in this country, but in different parts of the world with which we are connected. The twenty years, therefore, which had been selected by Mr. Bourne, must be read not only in the light of the figures he had so lucidly put together, but in the light of those causes to which he had referred which had interfered with the ordinary process of production and consumption; and it was impossible to put the proper meaning upon Mr. Bourne's figures without bearing those circumstances in mind. In addition to these there was another set of causes altogether different in character, but probably more important in influence than those to which he had referred, namely, the discoveries of gold which began in Australia and California between 1848 and 1851. During the first seven or eight or ten years of the period taken by Mr. Bourne the annual production of gold from Australia and California went on increasing year by year until about the year 1860 when it attained a maximum. Since then it had gone on steadily declining. At the present moment the decline had amounted to something like 40 per cent. of the total increase which occurred between 1850 and the years he had referred to, and that decline seemed likely to go on. Another cause, perhaps more potent than any he had yet mentioned, was the almost universal extension of the railway system. No one could doubt for a moment that the effects produced by the increase and cheapening of the means of communication resulted in one of those great silent revolutions which mark an epoch in the world. Then there was the establishment of the electric telegraph, which conveyed intelligence in the course of a few hours which formerly could not be conveyed in the lapse of weeks or months; and belonging also to the same order of causes has been the removal in a very considerable part of the civilised world, more especially over central Europe—in Germany, for example—of a great many mediæval customs which interfered, while they were in existence, with the free exercise of intelligence and freedom, and with all those powers which enabled one country to excel another in industrial arts and industrial progress. Mr. Bourne had invited the Society to consider, by the aid of his figures, this period of twenty years of the commercial history of the world, one of the most interesting and perplexing that had ever occurred. Speaking for himself, he should have been quite prepared if the contrasts brought out had been more startling. Undoubtedly when Mr. Bourne shows that the total value of the goods imported into the United Kingdom between 1854 and 1874 had risen from 152,000,000*l.* to 370,000,000*l.* and that the exports had risen from 116,000,000*l.* to 297,000,000*l.*, these were extraordinary statements to be able to make upon authentic data; and when he observed the names of one country after another with which the trade had no doubt wonderfully increased, the result was one which anybody living in 1854, even in his most sanguine moments, could not have been expected to realise even in the faintest manner. The increase from 34,000,000*l.* to 81,000,000*l.* of imports from the British colonies was also very surprising, and one's astonishment was by no means decreased when the details were examined. The exports to Germany had risen from 13,000,000*l.* to 34,000,000*l.*; but he thought that these two figures did not quite accurately represent the real fact, because the 34,000,000*l.* had not all gone to Germany. Many of the exports travelled beyond the German frontier to Austria and Hungary, some of them penetrating into Turkey and Asia Minor. The exports to Holland according to the tables had risen from 7½ millions to 22½ millions, but we knew perfectly well that the population of Holland had remained very much as it was. Holland had only become a sort of gateway for the central part of Europe, and its trade had increased, not because the consuming power had increased, but because free trade doctrines had spread in that central part of Europe lying beyond Holland. So it would be found with other countries. Interesting as Mr. Bourne's figures were, they required to be read in the light of an enlightened intelligence in order to arrive at their real meaning. The first lesson to be drawn from the comparison of the two years was that there had been a triumph, and a complete vindication of the free trade policy, and the principles of Liberal administration in all commercial matters which the country adopted thirty years ago. The increase in trade was not greater than we had a right to expect, looking at all the circumstances, and the amount of capital which had been applied in the case of this country to the purposes of foreign trade. One of the tables stated that the total imports had increased from 118,000,000*l.* in 1854 to 288,000,000*l.* in 1874, and that the exports only increased from 79,000,000*l.* to 220,000,000*l.*; that is to say, the imports had increased very much more than the exports. That was what should happen. The country became rich by what it received and not what it gave away. The reason why upon the face of the Custom House returns the imports so much exceeded the exports was that our wealth increased year by year, and we became great lenders, great purveyors of capital to all the nations of the world, and in the majority of cases we obtained dividends, although in some instances, as in certain of our loans to foreign States, we were grievously mistaken. The outside public had no idea to what extent British capital was employed also in private enterprise. The capital so employed must be remunerated by returns of one sort or another, and that remuneration must come in the form of goods. There could be no mere hocus-pocus of interchanging one piece of paper for another unless there was some real commodity behind it, and that commodity must be goods or something produced by labour having a value when brought into the market. It would be seen in the comparison of the figures of the total imports with the exports to what extent our capital had increased during the twenty years, and to what extent it had been employed in other parts of the world. Mr. Bourne had referred, and very properly, to the very considerable increase which had taken place in the import of articles of food. That was one of those things which he (Mr. Newmarch) thought might have been reasonably expected. The increase in the value of articles of food was dependent upon two circumstances. First of all it had been largely affected by periods of scarcity caused by the occurrence of diseases among cattle and sheep; and it had also been affected by the increased wages of the great mass of the working-people, who were thus enabled to become consumers of animal food. One of the facts which came out very strongly in the inquiries which were made forty or fifty years ago, prior to the adoption of the new poor law, was the exceedingly limited number of persons in this country who were able to add animal food to their ordinary diet, except on some few days in the course of the year; and that must have been a dire necessity, because anybody who had the means of obtaining beef and mutton would not go without it. The increase of the earnings of the working-classes since 1854 had enabled them to command a larger proportion of these articles of food and they had not failed to do so. That in the first place was an answer to the question very properly raised by Mr. Bourne, as to the enormous increase that had taken place in the importation of articles of food. The answer in a secondary degree was to be found in the fact of the increase which had taken place in the price of animal food, and in various other articles of food arising from the occurrence of periods of scarcity, arising from the interruption of war or from some of those exceptional causes to which he had referred. But in a country like this, where the surface of the land is limited, so long as the country continues prosperous, a continued and steady tendency to an increase year by year of the quantity of commodities which are adapted for food, was the natural state of things. If it should happen that we should find a state of affairs in which the volume of the imports representing articles of food should begin to exhibit a decline, that would be a very serious circumstance to be taken into account as indicating that our means of commanding those kinds of food had become seriously impaired. The increase which had taken place in the quantity of raw materials consumed in this country was one of the most gratifying circumstances which came out of Mr. Bourne's paper. Take, for example, the case of India. The imports in 1854 were about 13,000,000*l.*, and in 1874 they amounted to 37,000,000*l.* This arose from the enormous extension which had taken place in the import of raw materials, such as jute, cotton, silk, tea, and a great many other things which were never dreamed of as articles of import twenty years ago. There had also been an increase in the imports from British North America, which was substantially subject to the same explanation. Notably there was the extraordinary increase from 4,000,000*l.* to 21,000,000*l.* in imports, nearly all raw material from Russia, represented by timber, flax, jute, tow, &c. The same was true as regards Turkey, emphatically true as regards Egypt, and also true as regards Brazil. He thought that in these circumstances there was to be found an answer to the question with which Mr. Bourne had concluded his paper, whether the comparative decrease which had taken place in the volume of our trade since 1871 indicates a falling off in our supremacy as regards manufactures, or whether it represents one of those casual fluctuations of trade of which there had been so many instances during the last thirty or forty years. He had the strongest possible conviction that it did not represent the decay of foreign trade at all, but was distinctly referable to one of those casual fluctuations which had occurred so often since 1854, and was in a large degree attributable to the decline of our trade with the United States of America. Down to 1872, and probably down to nearly the close of 1873, there prevailed in America as a legacy left by the war a state of things especially unsound. The United States were still the victims of two great fallacies, the protectionist theory, and an unsound theory of money, which two together during the last two years had inflicted, and as far as he could see were likely to do so for some time to come, the most intense suffering which could be inflicted by a commercial collapse. Our trade with the United States had, therefore, suffered an extreme collapse, and at the present moment there was no prospect of its being removed; but that it would be removed he had no doubt whatever. Beyond that, the abnormal state of things created in this country in 1871 and 1872 by the sudden and spasmodic demand which then arose for certain "instrumental" articles of steel and iron, and coal, and one or two other articles connected with them, had led naturally to a state of reaction referable to natural causes, and there was no reason to suppose that it would not pass away. He thought that as Englishmen we had a right to congratulate ourselves on the facts presented by Mr. Bourne. We had the satisfaction of knowing that whatever progress had been made during the last twenty or thirty years had been won in the face of all the world by virtue of free trade doctrines and practice, and by a constant effort on our part to impress these doctrines on other nations. The results had not been attained by any device or contrivance, but by industry, skill, and intelligence, and so long as these remained with us we should continue to reap the rewards which Mr. Bourne had shown in his paper.

Mr. W. J. Kennelly, referring to the percentage tables, said it might be well to examine the strokes minus as against plus before the percentage of increase or decrease in imports or exports in each year. He took it that these figures as they stood revealed the circumstances which produced them. No doubt the basis of England's commerce was a mercantile marine. In 1857 there was a large divergence of shipping, chiefly arising out of the Indian mutiny. So in regard to the Crimean war and the American war, the minus percentage that followed these might be accounted for in the same way. The minus in the year 1867 was probably due to the commercial panic which visited England in that year, and the minus before the year 1874 was due to the extreme price of coal, which was the basis of our manufactures. If the figures on the export table were also considered, they would in a great measure tend to show that his reasoning was more or less accurate. In reference to the concluding question asked by the paper, he was not one of those who thought that this country had reached the summit of its greatness; on the contrary, he thought that it had yet to attain a much greater height before it began to decline. There could be no question whatever that another basis of our success, as a commercial people, was our coal and our iron. Our coal had been very much disturbed last year, and for the next two or three years it was likely to disturb our mercantile measures, but he had no doubt that by-and-bye we would recover our lost position. In regard to the question of free trade, he thought we might deal a little more temperately with regard to other nations, as we were placed in a peculiar insular position, and were to a great extent the collectors and distributors of the products of other countries. He should be glad to see the day when there was no custom house in this country; but there were nations at present who could not afford to dispose of their custom houses. He believed that the time was coming when nations would be better taught, and learn to know better. He could not but express very great regret at the position of the United States, as it was a position unbecoming that great people, but we could also afford to sympathise with them, and he trusted the day was not far off when they could show tables as comforting to themselves as the tables presented by Mr. Bourne were to this country at the present moment.

The President, speaking in reference to the plus and minus quantities on the tables, said it was curious to observe how many years together the pluses prevailed, and how every now and then, for a single year or so, the minus came in. He had noticed the same peculiarity in reference to tables of mortality, where the succession of favourable years was about the same as that shown on Mr. Bourne's tables, namely, five or six years, with one or more unfavourable years following.

Mr. JOHN FINCH said he should like Mr. Bourne to explain the different systems on which the value was taken of imports and exports, as he apprehended that the mode of taxing imports was one way of ascertaining the value, but the way of ascertaining the value of exports must be very different.

Mr. RAWLINSON, C.B., said that the question of imports and exports necessarily connected itself with population and civilisation, and as civilisation extended we might expect our commerce to extend. Whether we in England, as a commercial people, had arrived at our maximum, was not a question for him to discuss. In regard to imports of raw material, he thought the paper had not trenched upon one point which came under his notice during his inquiries into the pollution of rivers, namely, that raw material, such as wool, cotton, silk, wheat, have about doubled their value in a manufactured state. The question of extending our trade and commerce was intimately connected with the growth of our population, the feeding of it, and the stability with which it worked. In our civilisation we had lately been very much disturbed by strikes, arising in a great measure from ignorance and jealousy, and in some degree from a spirit of envy on the part of the uneducated. If our trade and commerce was to extend and grow, we must endeavour, by all the means in our power, to carry the working classes along with us, and to conciliate their friendship and good feeling. He must confess that he looked with some degree of alarm at the enormous growth that is taking place in this country in building operations. Having been from his youth a student of history, he had found that nations had a birth, a youth, a maturity, and a decay, and he could see in the enormous growth that was taking place some seeds of decay. Placed as we were in an insular position, we could not keep our people in food and provisions unless peace were maintained; and if anything occurred to disturb the peace of the world, and great nations were to enter into war against us, it would be a very serious thing for the masses who lived in this country.

The PRESIDENT said there was one kind of export that had not been noticed in the paper, namely, the export of men, women, and children. It was hard to say what value ought to be attached to emigration, but it must be very considerable, as it formed a great item every year of what might be called merchandise, which might be a gain to other countries and in some sense a loss to this country. If our men and women could be employed productively at home it would be better to keep them at home, but if the country was the loser by their remaining here it was better that they should emigrate. He would be inclined to treat emigration as an export, which might be added to the returns produced by the author.

Mr. F. Saunders, referring to the observations made by the President, said that on reference to the tables it would be seen that the total percentage of increase for the twenty years from 1854 to 1874 of exports to the British possessions amounted only to 113 per cent., and the total percentage of foreign exports was 177 per cent. He believed that that was owing to the exportation of men, women, and children. They carried with them the arts, manufactures, and possibly some of the sciences, and as soon as our colonies were in a position to get their own machinery, they increased somewhat in wealth and set to manufacture their own goods. As regards the decrease between the years 1872 and 1874, he agreed with Mr. Rawlinson that the unfortunate strikes had had to do with it.

Mr. Newmarch asked permission to say a few words in reference to three points. In reference to the plus and minus signs in the tables, he was very much pleased to think that as the collection of statistical data became more complete the law of plus and minus signs occurring in cycles would become more completely developed. In almost every class of statistics there was the occurrence of the same cycle of changes. As regards the prosperity of this country, referred to by Mr. Rawlinson, there was always this answer to be made to the old notion of all countries having periods of youth and decay, that it was a rhetorical figure, which was only applicable under very limited and artificial considerations. The real security for the progress this country was likely to make was that we had made our progress, great or small, in the face of all the world without any artificial aid or support of any kind. Our working classes had been able to hold their own and to produce the results shown in the tables apart from Government interference or control of any sort; and that was more than could be said of any of the nations of antiquity referred to. There was then no such thing as free trade, free labour, free thought, and free intelligence, all of which we had in this country. In reference to the exportation of women and children, he thought it was a mistake to suppose that the country had received injury from it. If there was any trade in the world that would take care of itself it was emigration, which would cease the moment that the attractions of a foreign country fell below the expectations of the emigrant. While giving the most absolute freedom to men and women to come and go just as they pleased, we should take care that our own country was made the most attractive and profitable place of residence in the world.

Mr. T. B. Martin, while agreeing with some of the remarks of Mr. Newmarch and the previous speakers as to the various causes tending to increase the figures, called attention to the increase in Table VII. of the exports of ammunition from 442,000*l.* to 1,763,000*l.*, upon which, he thought, we could not congratulate ourselves. Within the last year or two the value of land, coal, iron, labour, and other things had assumed a lower standard, and it was a question how far the figures were diminished by that cause. In 1854 the imports exceeded the exports by 132 per cent., and in 1874 the imports exceeded the exports by 120 per cent. only. He did not know whether that was a matter we could congratulate ourselves on or not.

Mr. **Archibald Hamilton** said, with regard to the value of an emigrant, he did not know whether any estimate had been formed in this country, but Mr. Julius Vogel, the Prime Minister for New Zealand, had valued an able-bodied man landed in New Zealand at somewhere about 180*l.*, looking at him as a producer or a person adding to the wealth of the colony, and as a taxpayer, when he became the head of a family, he was worth 13*l.* or 14*l.* Instead of an emigrant being a loss to the country he was of opinion that every man that went abroad to the colonies added to the comfort and wealth of those at home, because every labourer that left this country for the colonies or the United States diminished the competition for employment. Besides, every man who went abroad furnished employment to those that were behind. Every emigrant took 10*l.* or 12*l.* of equipment that added to the wealth of the country.

Mr. **James McDonald** said he did not know if any deduction had been made in the gold-producing states such as he thought ought to have been made on account of the gold discoveries of which so much had been said. Probably if they could be subjected to some such deduction as that the increase would be by no means so great as it now appeared. The large percentage of 20 per cent. in the year 1856 was to some extent to be accounted for by the gold discoveries exercising a beneficial influence on price. He should have liked some gentleman conversant with the subject to have shown how far, as regards certain of these countries, such a cause was to be taken into account. A great deal had been said as to whether the tables were sufficient to enable a correct opinion to be formed as to whether this country was increasing or decreasing in commerce, but he thought that could not be judged of unless some data were given, with respect to the progress which had taken place in other countries. He thought also that more striking results might be obtained by comparing the imports and the exports. He cordially agreed with Mr. Newmarch that the best state of things would be that in which all were imports and no exports; but that not being a condition of affairs attainable, it might be well to see how far our labour was increasing in efficiency, the degree of efficiency being tested by the increasing difference between the imports and the exports.

Captain **Craigie** called the attention of the author to Table V, where the increase per cent. of sugar from 1854 to 1874 was put down at 587 per cent. Considering that 10,776*l.* represented the imports in 1854 and 20,181*l.* was the amount in 1874, he thought that there must be some mistake as to the 587.

Mr. **Bourne**, in reply to the several speakers, said that at present the value of the imports and the exports was arrived at by essentially the same system, namely, the declaration of the importer or exporter, who, on sending his documents to the Custom house, was bound to state the value assigned to his goods, whether coming in or going out. In both cases the proper value was that of the wholesale price on board the ship at the time she dropped her anchor or when she heaved it. Prior to 1871 that did not hold good. There was then no difference in regard to the valuing of the exports, but in regard to the imports there was a computed instead of a declared value. The quantities, as well as the average market price were ascertained, upon which the officials calculated the value. If there were 1,000 cwts. of sugar, and the average price of sugar was 30*s*., the 1,000 would be multiplied by the 30*s*. At present, however, the merchant declared it himself. The average value by the officials was not a mere guess, or a very wide one, because they took into consideration the description of goods coming from different countries, and he thought it was perhaps an open question as to which system was the most accurate. The merchants, perhaps had no very great interest in giving the most accurate statements,—not that they wished to do otherwise, but the business was to a great extent transacted by juveniles, on whom, however, a system of check was exercised; so that every value which seemed to be out of the ordinary routine was called in question and required to be substantiated. The export value was founded upon the declaration of the exporters upon shipment. The goods were generally on board the ship and out of the reach of officials before any inquiry could be made about them. The question as to whether any calculation had been made relative to the discoveries of gold was, he thought, rather wide of the mark of mere statistical calculation, and would require a good deal of thought and research, although he quite agreed with the speaker that it was a very important element to be taken into consideration. A remark was made that we were not to be congratulated upon the increased exportation of ammunition. It did not follow from that circumstance that there had been more war, but that we had succeeded perhaps in manufacturing the best ammunition, and thereby securing better customers. He was inclined to think that there was an error in Table V, but certain circumstances had prevented him from fully correcting the proof sheets—possibly there might be one or two small corrections to be made before the *Journal* was issued, and the error in the table referred to was perhaps one of them. He thought he might feel some degree of congratulation in having provoked so very able and elaborate a speech from so high an authority as Mr. Newmarch, and if his figures had no other effect than that he should be satisfied. He did not quite agree with Mr. Newmarch in all his points. He was not so sure that the present stagnation was of a transitory nature, because we could not but see that concurrently with our diminution many other nations were beating us in price. He did not think there were any great grounds for dissatisfaction on account of the foreigner running us so close, because if the supposition he had hazarded be correct, many of the manufactures abroad were to a very great extent carried on by British capital, and we might be enjoying the benefit of the outlay in increased importations.

MISCELLANEA.

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I.—*International Exhibition and Congress of Public Health and Safety, to be held in Brussels in* 1876.

THE idea of instituting a Congress and holding an International Exhibition in Brussels, in 1876, of all means, appliances, instruments, and measures for saving human life and preserving health, having been enunciated by the Royal Humane Society of Belgium, presided over by Lieutenant-General Renard, aide-de-camp to the King of the Belgians, a number of gentlemen resolved to form a joint stock company to carry it into effect. The scheme is to be put into operation by the collection of a capital of 24,000*l*., in 8*l*. shares, of which one-half is to be paid up at once, and the remainder to be called up at fixed periods by the council of administration, the prepayment of the whole being, however, permissible.

The cost of management, buildings, machinery, &c., is to be defrayed from this fund, and all receipts on account of the Congress and Exhibition are to be credited to a special fund, for distribution among the shareholders at the close of the exhibition.

Detailed rules for the management of this philanthropic and eminently useful undertaking, and for its careful regulation on strictly commercial principles have been promulgated with the programme; and as it inaugurates a new, important, and sound economical basis for such undertakings, it is deemed desirable to incorporate in the Miscellanea of the *Journal of the Statistical Society*, a brief account of the project.

The Congress and Exhibition are under the special patronage and protection of the King of the Belgians and of the City of Brussels, with his Royal Highness the Count of Flanders as honorary president.

In an eloquent address to all public administrators, to all orders of chivalry, to all professions, societies, and individuals whose public duties, professional pursuits or personal proclivities tend to the preservation of life and health, the objects of the proposed scheme are explained at length. Of this address the following is a free translation and summary:—

> The study and application of the most salutary principles of public health and safety, in their largest sense, have now become objects of primary necessity,

from the accumulation of populations in great centres, and from the development of the industry and commerce of nations.

Recent events render it desirable to diminish the evils fatally associated with incessant progress, and life at high pressure. Terrible fires have nearly destroyed large cities; fatal collisions on sea and on land are frequent, and will become more so with the advance of civilisation and the transactions to which it gives rise. Mercantile fleets are multiplied, and with them the shipwrecks which sadden every storm; war is no longer waged by limited armies, but whole populations cover fields of battle, and the regular means of affording them aid fail in the presence of such wholesale calamities; epidemics occasionally cause panics in populations; different industries increase incessantly, and absorb more and more entirely the entire strength of town and country, among all civilised nations.

Some of these place the lives of the labourers in constant peril, others wither the vital powers of those who pursue them. Society, then, has powerful inducements to provide against and mitigate these obvious evils, and owes a deep debt of gratitude and consideration to those devoted and disinterested individuals who, singly or in societies, make constant efforts to save or protect human life, and to provide for the health and safety of the multitude and of the toilers.

Of a truth, governments, public administrations, great manufacturers, medical men, engineers, and all large-hearted persons have not awaited the need to apply the remedy. Everywhere the means of solving questions affecting the welfare of humanity have been diligently sought; everywhere important works of surpassing interest exist; but these works should not be confined to localities, they belong to the whole world.

Different nations should enlighten each other, and make known generally their several discoveries.

The works of genius accomplished by many eminent engineers and many distinguished manufacturers to protect the lives of the workers, and to ameliorate the conditions in which they live, should receive due recognition and publicity. To give but one example—who can deny that when numerous casualties on railways, at sea, or in mines spread abroad mourning and misery, it would be a public relief to have carefully discussed, by competent men of all nations, the means of preventing, or at least mitigating such disasters, with a consideration of the means and appliances intended to reach that end? In other words, to group together all that the charity and foresight of public bodies and private individuals have thought of or produced to save and protect human life, and to come to the rescue in danger and suffering.

Periodical congresses, associated with international exhibitions of engines and instruments of health and safety, would serve to bring about this result.

It is true that many of these questions have already been discussed and resolved at such congresses. Unfortunately, however, the valuable experience thus acquired has never been popularised. The discussions have been confined to the learned, and are recorded in books which the public neither read nor appreciate, so that those for whose special benefit measures of health and safety are devised, are the last to profit by them.

It is true, that in the Great Exhibitions of London, Paris, and Vienna Health and Public Safety have not been overlooked, but the departments relating to them were scattered, separated, and lost in the splendour of the more attractive portions of these exhibitions. They also attracted little attention from the absence of explanation of their nature and use, and from the general indifference with which these matters have heretofore been treated.

All this will be remedied in the Exhibition of 1876, in which the public attention will be concentrated on the one class of objects, and the means be afforded of forming a correct judgment of the things exhibited, with their relative value and the uses to which they can be applied.

The Congress will be divided into as many sections as there will be classes in the Exhibition. The discussions will chiefly be directed to the machinery sent for exhibition. Committees appointed by the sections will make public trials of the apparatus or processes proposed, and every one will thus be enabled to appreciate the resultant benefits from personal observation.

Thus will public opinion be brought to aid the good work—the publicity of experimental trials being the best means of popularising the efforts of the learned, and causing the adoption by public bodies and private individuals, of such contrivances as are proved to be efficient.

The work of 1876 will have this special character. The Congress and the Exhibition will be complements of each other. While the former will consider and discuss all questions in their largest sense, the latter will exhibit all that genius and ingenuity have constructed to preserve or protect human life, and assure the well-being of nations. The engines, the apparatus, and the processes shown will be open to public scrutiny, and as often as possible public discussions will popularise their modes of action and uses. These discussions will be collected and published in small tracts at the lowest possible cost, with a view to spread abroad a knowledge of the leading principles of health and safety.

On the other hand, the transactions of the different classes of the Congress will be printed, and in their collected form will constitute a code, which public administrations and those devoted to special objects connected with health and safety, may study with advantage for a long time to come.

Experiments on the river and on the sea will be made respectively at Antwerp and at Ostend. The great manufacturers will lend their assistance in the conduct of experiments which are only possible in factories, workshops and mines.

It is not anticipated that all the questions contained in the programme will be exhaustively treated. The programme itself is incomplete and will need additions, but, if the enterprise succeeds, other nations will follow the lead of the Belgian Congress and Exhibition of 1876, which will serve as a period of departure for gatherings which may not inappropriately be termed THE GRAND ASSIZES OF HUMANITY.

To carry out its project the joint stock company addresses itself exclusively to private initiation. As the work is of universal interest, it invites philanthropists of all nations to participate in raising the funds necessary to furnish the means of accomplishing the undertaking.

The Society hopes that the receipts will cover, and possibly exceed, the expenditure, and that the shareholders will be recouped their advances. It bases its hopes on the past success of all such enterprises in other countries under well directed private energy, and recently in the success of the Industrial Arts Exhibition of Brussels. The aid of all is disinterested. Great and costly palaces are not needed: simple galleries, well lighted, ventilated and arranged will accomplish all that is needed.

The Exhibition and Congress will be divided into ten classes. The first class will comprise all relating to saving of life from fire by land and by sea, and will consist of five sections, each devoted to a particular branch of the subject.

The second class, in six divisions, will in like manner contain all relating to the saving of life on and in the water, from drowning and skating to the lighting of coasts, shipwrecks, the safe construction of vessels of all classes, and the transport and treatment of sick and wounded afloat.

The third class will be devoted to the means of preventing accidents in travelling by road or by rail, and will be divided into ten subsections.

The fourth class will consist of aid to belligerents in time of war, in five sections, comprising means of transport, surgical appliances, ambulances and field hospitals, the disposal of the dead, and the sanitation of battle fields and encampments.

The fifth class, in eight subsections, will embrace the wide field of hygiene and public health.

The sixth class will include, in three sections, the means of maintaining the health and protecting the lives of all engaged in industrial pursuits.

The seventh class will be occupied, in four sections, with private and domestic health.

The eighth class will discuss medicine, surgery, and pharmacy in their relations to all the preceding classes; and the ninth class will comprehend all institutions intended to ameliorate the condition of the working classes, such as life assurance companies, benefit and co-operative societies, infirmaries and convalescent hospitals, and means of promoting temperance, &c.

The tenth, and last class, will contain, in seventeen subsections, the protection of health and life in their applications to agriculture.

If the Congress and Exhibition can arrive at useful practical results in one-tenth of the important matters contained in the foregoing brief examination of their comprehensive plan and purpose, they will accomplish a great and useful work, and pave the way for future inquiries in a direction of which it is impossible to overestimate the value and importance.

II.—*Conference of Government Statists, South Australia.*

Now that the colonial possessions and settlements of Great Britain are expanding with the wonderful progress characteristic of the Anglo-Saxon race in every quarter of the world, it is of infinite importance to the future of those possessions and of the Empire to which they are attached, that all facts indicative of their moral and material state in the early stages of their growth and development, should be carefully recorded.

Many of them in extent of territory, fertility of soil, variety of natural productions, mineral wealth, and climates capable of containing and rearing healthy, vigorous communities, possess greater capabilities than several European states which have held, and some of which still occupy, important positions in the great brotherhood of nations.

Should they, hereafter, be united in any form of confederation among themselves, or should Great Britain, at no very distant period, see her way to gathering her children around her in a stronger bond than exists at present, it is difficult to foreshadow without apparent exaggeration, the important influences which such federation may, if rightly directed, exercise over the destinies of the whole civilised world.

The great political and social problems of that impending change will need for their solution the most careful collection of the facts and figures which are the basis of all sound legislation, of all true freedom and liberty, of all intercolonial and international relations, and of all substantial progress.

The colonies of New South Wales, Victoria, Tasmania, and South Australia have led the way in this desirable direction, and, pursuant to the instructions of their respective governments, held a Conference of Statists at Hobart Town in January of the present year, to settle the basis of an uniform system of statistics for the southern dependencies above mentioned.

The official representatives who assisted at this Conference were the Under Secretary and Government Statist of South Australia, the Government Statists of Victoria and Tasmania, and the Registrar-General of New South Wales.

The matters considered by them and the resolutions at which they arrived are so deeply interesting, and are given in the printed proceedings of the Conference in so condensed a form, as to render it difficult still further to concentrate or abstract them, without the omission of particulars necessary to their right understanding: they are, therefore, reproduced *in extenso.*

Census.—I. "The first subject which the Conference proceeded to consider was the taking of the next census, on which the following resolution was agreed to:—

"That it is desirable that a census be taken simultaneously in all the colonies, at least once in ten years, and on the same day as the Imperial census; and that the schedules and compilation should in all essential particulars be in accord with the systems adopted in the United Kingdom.

II. "The Conference having next carefully considered and compared the statistics of their several colonies, agreed to embody the results of their deliberations in the following resolutions:—

Alterations, when to take Effect.—(1.) "That any alterations in the statistical returns which may be agreed upon at this Conference, shall take effect in respect to the statistics of 1875.

Returns from Departments.—(2.) "That inasmuch as the value of statistical information is enhanced by early publication, the government of each colony be respectively requested to require departments to supply all necessary particulars at the earliest practicable period after the close of each year, and to authorise such arrangements as may be requisite to effect that object.

Furnishing of Information to be Compulsory.—(3.) "That it is desirable that legislative authority should, in colonies in which it does not at present exist, be procured for the compulsory supply of agricultural and other statistics, in such form, and in such manner as the Governor in Council may direct, thereby extending the principle hitherto adopted in taking the census.

Arrivals and Departures.—(4.) "That, with a view to the more accurate preparation of periodical estimates of the population, each government be requested to cause the returns of arrivals and departures to be interchanged between the customs' authorities of the several colonies.

Mean Population for Certain Purposes.—(5.) "That in making comparative returns of revenue, expenditure, imports, exports, and any other matters, the operation of which extends over the entire year, the mean population of the year be taken as the basis of the calculation.

Form of Customs' Returns.—(6.) "That the government of each colony be further requested to cause the periodical returns of the quantities and values of articles imported and exported, to be prepared, according to the form and nomenclature, and under the classification agreed to by the Conference; and to direct the attention of the customs' authorities to the importance of entering, whenever practicable, the number, quantity, or weight of articles imported and exported, in preference to the number of packages.

Coin and Bullion.—(7.) "That the import and export returns should in every case include bullion and specie; and that a separate return be given distinguishing coin from bullion, and whether the latter be the produce of the colony.

Goods Transhipped.—(8.) "That a separate return be given of goods entered for transhipment, but that such goods shall not be included in the returns of imports and exports.

Goods in Bonded Warehouses.—(9.) "That a return be given of the stocks in bonded warehouses at the termination of each year.

Steam Vessels.—(10.) "That in the returns of shipping, it is desirable to show the number, tonnage, and crews of steam vessels, as distinguished from sailing vessels.

Customs' Revenue and Duties.—(11.) "That a return of the customs' revenue, specifying the articles, rate of duty, and amount collected, be given for each year.

General Revenue.—(12.) "That the returns of general revenue should show the principal sources of income; and that the returns of general expenditure should show the services for which the expenditure was incurred, according to a classification agreed to at this Conference.

Loans Excluded.—(13.) "That the returns of revenue should exclude the amounts raised by loan.

Interest of Loans Included.—(14.) "That the returns of general expenditure should exclude the expenditure of moneys raised on loan, but should include the interest on and repayment of loans.

Separate Returns of Loans.—(15.) "That a separate statement be given of loans raised by the general government, distinguishing whether for reproductive public works, military defence, immigration, &c., or in aid of revenue; also the rate and amount of interest paid in respect of such loans, and the repayment of any portions thereof.

Aggregate Return of General and Local Finances.—(16.) "That a return of the aggregate revenue and expenditure of the general government and of local government bodies be given in one table.

Taxation for General and Local Purposes.—(17.) "That it is desirable that a return be given, showing separately and collectively the amount of taxation for general and local purposes, embracing—

"Customs duties (exclusive of duties on the export of gold, drawbacks, &c.).
"Excise (including licences imposed for revenue purposes).
"Stamps (other than fees of office).
"Legacy, succession, and probate duties.
"Rates on property or income.

"Any impost distinctly levied as a tax, but excluding fees, licences, or charges for special services rendered.

Banks: Liabilities and Assets.—(18.) "That the banking statistics of each colony be rendered quarterly, in the form prescribed by local Acts, but distinguishing 'deposits bearing interest,' from 'deposits not bearing interest.'

Land: Number of Holdings.—(19.) "That the statistics relating to the occupation and cultivation of land should include the number and extent of holdings (classified as to area), distinguishing those held direct from the State under deferred payment from freeholds; and the area and produce of the several crops.

Labour and Machinery Employed.—(20.) "That it is desirable to ascertain annually the amount of labour employed in agricultural, mining, and other of the more important local industries, and also the extent of machinery (steam or otherwise), and of all labour-saving appliances, used on farms, in mills, mines, or factories.

Railway Returns.—(21.) "That in any returns relating to railways it is essential that the cost of construction and mileage open be shown; that the receipts and expenditure, and the mileage run be given; and that the cost of maintenance of works and stock be distinguished from the ordinary working expenses. Additional rolling-stock and new works to be placed under the head of construction.

Educational Statistics.—(22.) "That the statistics of education should include, in addition to returns from public and private schools, statistical statements relating to the higher degree of instruction obtainable at the universities, colleges, technical schools, institutes, and public libraries of the several colonies.

Criminal Statistics.—(23.) "That the criminal statistics, and statistics relating to prisons, proposed by the Right Honourable the Secretary of State for the Colonies, be adopted with certain alterations the Conference consider necessary to meet the circumstances of the Australian colonies; and that, with a view to procure accurate returns, the several governments be respectfully requested to cause particulars to be recorded by the police and other authorities in the form adopted by the Conference.

Vital Statistics.—(24.) "That the vital statistics, as published periodically by the several colonies, appear to meet all requirements, and accord with the English system; but the Conference recommend that separate returns be given for large centres of population, where the aged and afflicted congregate in hospitals, asylums, &c. They also proposed that a Meteorological Abstract for the period accompany each return.

Returns Essential.—(25.) "That the making the returns agreed to at this Conference be considered essential—each colony being at liberty to amplify them to such extent as may be thought desirable.

Co-operation of Colonies not Represented.—(26.) "That the colonies of Queensland, Western Australia, and New Zealand, be invited to co-operate in the general scheme of statistics laid down by the Conference.

III. "The Conference submit the foregoing resolutions to the favourable consideration of their respective Governments, and respectfully recommend that, where indicated, legislative sanction be sought to give effect to them.

IV. "Besides the matters embodied in the resolutions, the Conference went fully into the details of the returns published in their respective statistical registers, and decided on such modifications as would cause the tables to agree in all material points.

V. "In determining upon the nature of the alterations to be made in their statistical records, they agreed to consider certain particulars as essential, leaving it at the discretion of the several colonies to supply others which were regarded as desirable, though not obligatory, according to circumstances.

VI. "They have, moreover, not been unmindful of the desirability, as far as possible, of assimilating the statistics of the various colonies of this group, not only as among themselves, but as between themselves and the mother country.

Resolution (23).—VII. "Among other matters which occupied their attention was the circular despatch of the Secretary of State, of 30th January, 1872, and the circular despatch, No. 2, dated 20th March, 1874, addressed to the Governors of the several Australasian Colonies, with reference to certain proposed forms of criminal statistics. In these they have made such amendments as seemed to be necessary in order to adapt them to the circumstances of the colonies, and now append them in their altered shape.

VIII. "They also considered certain forms relating to 'gaols and prisoners,' also received from the Secretary of State, and agreed to them with a few verbal amendments.

Resolution (4).—IX. "The returns of persons leaving any one colony, have in some cases shown a considerable deficiency as compared with the corresponding returns of arrivals in the colony for which they were bound, in consequence of a certain proportion of persons not appearing on the passenger lists of intercolonial vessels at the port of departure. The Conference have, therefore, agreed to recommend that the customs' departments of the different colonies be instructed to exchange returns of arrivals and departures, so that the numbers may be corrected by comparison before publication.

Resolutions (6 *to* 11).—X. "They have also had their attention pointedly called to the want of uniformity as regards the customs' returns, and to some other defects which are now found, more or less, in all of them. They have, therefore, adopted resolutions with a view to the improvement of the commercial statistics in regard—

(*a*) "To supplying the quantities of articles imported and exported, wherever practicable.

(*b*) "To the classification of articles in a manner which they believe to be suitable for general purposes, and, at the same time, well adapted to the requirements of persons interested in the external trade of the respective colonies.

Resolutions (12 *to* 16).—XI. "The subject of finance has always been fraught with practical difficulties to the Government Statists of these colonies. It has, therefore, occupied an important place in the deliberations of the Conference. They recommend that an abstract of the returns of the revenue and expenditure of the general government should, for statistical purposes, be embodied in a form which they submit as being, in their opinion, better adapted to convey the requisite information than the statements now furnished in most cases.

Resolution (17).—XII. "With regard to the subject of taxation, the Conference are of opinion that, inasmuch as imposts which in some countries form part of the State taxation, in others are levied by local bodies, a return should be added to the statistics of every colony, showing in one view the taxation for the purposes of the general government, and also that for local objects. As to the question—the most difficult the Conference had to deal with—what receipts should

be regarded as taxation, the Conference have laid down certain general principles, the application of which to particular cases will require extended research and consideration.

"E. C. Nowell, *Chairman*.
"E. G. Ward.
"H. H. Hayter.
"J. Boothby."

This statement is followed by an Appendix containing forms for criminal and judicial statistics.

It will thus be seen that in some important particulars these South Australian colonies have taken a step in advance of most nations, and even of Great Britain herself. By harmonising their statistical forms and returns with those of the mother country where assimilation was possible, they have facilitated the study of their future relations with each other and with the paramount power in a manner that cannot fail to prove most useful to statesmen, and all others interested in the government, extension, and consolidation of the British Empire.

III.—*General Results of the Commercial and Financial History of* 1874.

From the *Economist* of the 13th March, 1875:—

"Through 1874 the reaction which commenced in 1873 throughout Europe and America has continued. The prices of commodities and the wages of labour have declined month by month, until in the opening weeks of 1875 the reduction in the price of most of the articles employed in this country in manufactures is not less than 30 or 35 per cent. compared with the early part of '73; and probably not less than 20 to 25 per cent. compared with the close of that year. The fall in iron and coal in many districts exceeds these figures.

"Wages in the mining and iron and steel trades have also rapidly fallen, and in some cases have been reduced to about the figures which prevailed in 1871, before the recent rise commenced.

"The contests between masters and men have been severe in the process of arriving at these reductions; and one of the principal causes which has rendered the results so unsatisfactory to the trading classes has been the long periods of time during which strikes and lock-outs have brought various important industries to a standstill. At this moment (February, 1875) the whole of the coal and iron trades of South Wales is idle in consequence of a wholesale lock-out forced on the masters by the opposition of the trades unions to such a reduction of wages as will secure orders for the productions of the district.

"The harvest of 1874 in this country was the best and most abundant since that of 1868. Wheat was reaped and carried in excellent condition, and the general result is 25 per cent. above an average.

(I).—*Gazette Average Price of Wheat* (*per Imperial Quarter*) *in United Kingdom, immediately after Harvest*, 1863-74, *and Total Average Gazette Price of Calendar Years.*

After Harvest.	*s.*	*d.*	Calendar Year Averages.	*s.*	*d.*
1874	46	1	1874	55	9
1873	64	2	1873	58	8
'72	58	6	'72	57	–
'71	56	3	'71	56	8
	59	7		57	5
1870	48	6	1870	46	11
'69	46	2	'69	48	2
'68	53	6	'68	63	9
'67	70	8	'67	64	6
	53	9		55	10
1866	52	6	1866	49	11
'65	42	4	'65	41	10
'64	38	6	'64	40	2
'63	40	–	'63	44	9
	43	4		44	2

"The figures of 46·1 in October, 1874, contrast very strongly with the average of 59·7 for the three years 1871-73—and even with the average of 53·9 for the five years 1867-70. The last year of low price was 1868-69, when the figures were 46·2. There seems to be every probability of the price for 1874-75 falling short of even that limit by some sensible difference. Nor is the low price of wheat confined to these islands. It is general over the commercial world, and will, beyond all doubt, lay the foundation of a sound prosperity.

(II).—*Silver*, 1874-66, *Shipments to East, Bills Drawn by India Council on India, Imports of Silver into United Kingdom, Average Price in London, and Average Rate of Bank Discounts.* (Pixley and Abell's Circular.)

[0,000's omitted, thus 7,09 = 7,090,000.]

Years.	Silver sent to *East.*	Bills Drawn by India Council.	Imports of *Silver* into United Kingdom.	Silver *Coined* in United Kingdom.	Average Price Standard Silver in London.	Average Bank-rate Discount.
	Mln. £	Mln. £	Mln. £	Mln. £	Per oz. *d.*	Per cnt.
1874....	7,09	10,36	11,80	0,89	58 5/16	3¾
'73....	2,50	13,94	12,30	1,08	59¼	5½
'72....	5,65	10,21	11,14	1,24	60 5/16	4½
'71....	3,71	8,44	16,52	0,70	60½	3¼
1870....	1,58	6,98	10,65	0,33	60½	3
'69....	2,36	3,70	6,73	0,07	60 7/16	3¼
'68....	1,63	4,14	7,71	0,30	60	2
'67....	0,64	5,61	8,02	0,19	60	2¼
'66....	2,36	7,00	10,78	0,49	61⅛	7

"The export to the East (7 millions) has been nearly three times that of 1873 (2½ millions). The price 58$\frac{5}{16}$*d.* is the lowest almost on record, arising more immediately from the pressure on the market of the large amounts of silver coin displaced in Germany by the new coinage and banking legislation there; and arising also, it is believed, in some degree from the increased yield of the silver mines in South America and elsewhere. M. Herzog, the delegate of Switzerland to the Monetary Conventions of 1865-71, has investigated the subject with care, and has framed the following table:—

(III).—*Silver, Production and Export to East, according to the Work by M. Herzog, the Delegate of Switzerland at the Monetary Conferences,* 1865-71.

[00,000's omitted, thus 9,0 = 9,000,000*l.*]

Year.	Annual Production.	Export to East.	Year.	Annual Production.	Export to East.
	Mln. £	Mln. £		Mln. £	Mln. £
1851	9,0	1,6	1862	12,0	14,5
			'63	13,0	15,1
1852	8,8	2,7	'64	13,2	16,8
'53	8,4	5,5	'65	14,7	9,7
'54	8,5	4,6	'66	14,4	7,0
'55	9,0	8,0			
'56	9,1	14,1		67,3	63,1
	43,8	34,9			
1857	9,6	20,1	1867	14,7	2,1
'58	10,2	5,7	'68	14,0	3,6
'59	10,2	16,3	'69	13,5	6,6
'60	10,6	10,8	'70	14,8	2,2
'61	11,2	8,9		57,0	14,5
	51,8	61,0			
11 years totals	104,6	97,5	9 years totals....	124,3	77,6
,, avge.	9,5	9,0	,, average	13,9	8,6

"According to these figures we have the following averages:—

1851-61, eleven years .... 9½ millions sterling.
'62-70, ,, ... 9 ,,

Cotton Trade.

"Messrs. Ellison and Co. (Liverpool) report:—

"'So far as the cotton trade has been concerned, 1874 has *been a dull and uneventful year*. With the exception of an occassional spasm of activity, provoked by merely transient and delusive influences, the course of business has been monotonously slow, and the tendency of prices downwards. Throughout 1874 the actual supply of *the raw material has constantly exceeded the demand*, while the occasionally threatened prospect of a comparative deficiency has never been realised. The result has been an almost continuous *readiness on the part of holders to sell,* in the face of a nearly chronic indifference on the part of consumers to buy. It is not surprising, therefore, that 1874 has been an *unprofitable one to importers of the raw material,* and a scarcely less unsatisfactory one to shippers of the manufactured article. Under ordinary circumstances a year of *falling prices* is of advantage to spinners and manufacturers, but business in Manchester in 1874 has been so slow that yarns and goods have steadily followed the decline in raw cotton, and no advantage of moment has accrued to the producer except in isolated instances. The *speculative* department of the market has been almost uniformly quiet, and, as in 1873, the operators for a fall have had matters pretty much their own way. A remarkable feature is that the fluctuations in prices have been less important than in any year since 1860. The difference between the highest and lowest quotations for middling upland on the spot being only $1\frac{5}{16}$*d.* per lb., against 2¼*d.* in 1873, 2*d.* in 1872, $2\frac{13}{16}$*d.* in 1871, 4¼*d.* in 1870, and 2⅛*d.* in 1869.' "

"We add the following tables, compiled from Messrs. Ellison's Circular, and in continuation of the similar tables of former years inserted in the general summary of our review:—

(IV).—*United Kingdom,* 1857-74. *Estimated Value of Raw Cotton Imported, Re-Exported, and Consumed.* (Ellison's Circular.)

[00,000's omitted, thus 47,1 = 47,100,000*l.* The *bales* are given in full.]

Years.	Import.		Re-Exported.	Consumed, United Kingdom.		
	Value.	Price.	Value.	Value.	Total Weight.	Bales per Week, 400 lbs. each.
	Mln. £	Per lb. *d.*	Mln. £	Mln. £	Mln. lbs.	No.
1874........	47,1	7½	6,0	40,2	1,266,	60,870
'73........	54,2	8⅝	6,1	45,4	1,246,	59,910
'72........	53,3	$9\frac{5}{16}$	8,5	48,0	1,175,	56,510
'71........	55,9	8	9,8	40,8	1,205,	57,950
1870........	51,0	$9\frac{5}{16}$	8,2	42,1	1,071,	51,520
'69........	55,2	$11\frac{1}{16}$	11,3	43,8	940,	45,140
'68........	52,0	9⅝	11,6	41,0	996,	47,890
'67........	53,8	10⅛	14,0	41,2	954,	45,890
1866........	75,8	13½	19,5	51,9	800,	42,829
'65........	63,2	15¾	17,1	47,2	718,	34,550
'64........	82,2	22	22,1	52,4	561,	26,980
'63........	58,0	20½	21,6	40,7	476,	22,910
1862........	31,1	14	12,4	24,7	449,	21,620
'61........	38,7	7⅜	7,9	32,2	1,005,	49,800
'60........	36,6	6⅛	5,5	28,9	1,079,	51,890
1859.......	32,2	6½	4,1	27,6	—	47,000
'58.......	27,2	6⅜	3,3	24,8	907,	Not given
'57.......	28,6	7⅛	3,5	24,8	825,	

(V.)—*Cotton Cloth and Yarn, Exported and Estimated as Actually Consumed at Home*, 1857-74, *in Millions of Pounds Weight.* (Ellison's Circular.)

[000,000's omitted.]

1	2	3	4	5	6	7	8	9
Years.	Yarns and Cloth Exported.			*Home Consumption,* Yarns and Cloth.	Total Weight.	Average Prices of Raw Cotton.		
	Yarn.	Cloth.	Total.			Imported.	Exported.	Home Consumption.
	Mln. lbs.	Mln. lbs.	Mln. lbs.	Mln. lbs.	Mln. lbs.	Per lb. *d.*	Per lb. *d.*	Per lb. *d.*
1874....	220,	726,	946,	173,	1,120,	7½	6	7⅜
'73....	215,	688,	903,	175,	1,077,	8⅝	7	8¾
'72....	212,	698,	910,	129,	1,055,	9 5/16	7½	9¾
'71....	193,	680,	873,	199,	1,058,	8	7	8¼
1870....	186,	616,	802,	140,	942,	9½	8½	9¾
'69....	169,	535,	704,	112,	829,	11¼	10	11¼
'68....	174,	548,	723,	160,	883,	9½	8¾	9⅛
'67....	164,	523,	687,	145,	832,	10½	9½	10⅜
1866....	134,	491,	625,	145,	770,	13½	11⅞	14
'65....	98,	377,	475,	150,	625,	15¾	14⅛	15¾
'64....	71,	332,	403,	110,	513,	22	21½	22⅞
'63....	70,	321,	392,	93,	485,	20⅛	19⅞	20½
1862....	88,	324,	412,	102,	514,	14	13¾	14¼
'61....	177,	496,	674,	174,	848,	7⅜	6⅛	7⅜
'60....	197,	542,	740,	173,	913,	6½	5¼	6½
1859....	192,	500,	693,	172,	865,	6¼	5¾	6⅜
'58....	200,	452,	652,	158,	810,	6⅝	5¾	6⅝
'57....	176,	466,	583,	156,	739,	7⅛	6⅛	7¼

"In the following table will be found the exportation of cotton piece goods to the leading markets, for the years 1874-73-72 and 1860. The quantities, as in former years, are stated in millions of yards:—

(VI).—*Exports of Cotton Piece Goods*, 1874-72 *and* 1860, *in Quantities (Millions of Yards) and Percentage of Totals.* (Ellison's Circular.)

[000,000's omitted.]

Exported to	Quantities.				Per Cent. of Total.			
	1874.	1873.	1872.	1860.	1874.	1873.	1872.	1860.
	Mln.yds	Mln.yds	Mln.yds.	Mln.yds.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
India and Egypt	1,397,	1,340,	1,255,	910,	38·8	38·5	35·5	32·9
China	463,	401,	464,	324,	12·9	11·5	13·1	11·7
Turkey and Levant	306,	327,	330,	272,	8·5	9·4	9·3	9·8
	2,166,	2,068,	2,039,	1,506,	60·2	59·4	57·9	54·4
United States	105,	109,	132,	226,	2·9	3·1	3·7	8·2
Rest of America and West India	604,	619,	668,	527,	16·8	17·8	19·0	19·0
	2,873,	2,796,	2,839,	2,259,	80·0	80·3	80·6	81·6
Italy, Austria, &c.	207,	234,	219,	198,	5·8	6·7	6·2	7·1
Germany..................	116,	107,	130,	102,	3·2	3·1	3·7	3·7
Other Countries........	401,	343,	335,	217,	11·1	9·9	9·5	7·6
	3,603,	3,482,	3,535,	2,776,	100·0	100·0	100·0	100·0

"The following table completes the series relating to this branch of commerce:—

(VII).—*Cotton Trade, General Results*, 1857-74. *Estimate, per Ellison's Circular of* (1) *Total Value of Goods Produced;* (2) *Cost of Raw Cotton Consumed therefor; and* (3) *Balance left for Profits, Interest, Wages, and Expenses.* [00,000's omitted.]

Year.	Total Value of Goods Produced.	Cost of Raw Cotton.	Left for Wages, Profit, and other Expenses	Year.	Total Value of Goods Produced.	Cost of Raw Cotton.	Left for Wages, Profit, and other Expenses.
	Mln. £	Mln. £	£ Mln.		Mln. £	Mln. £	Mln. £
1874....	100,5	40,2	60,3	1865....	83,2	47,3	35,9
'73....	104,6	45,4	59,2	'64....	76,4	52,5	23,9
'72....	102,3	48,0	54,3	'63....	59,8	40,6	19,2
1871....	102,0	40,8	61,2	1862....	42,7	26,7	16,0
'70....	93,1	42,1	51,0	'61....	74,3	32,2	42,1
'69....	86,2	34,8	42,4	'60....	80,6	28,9	51,7
1868....	91,7	41,0	51,7	1859....	72,2	27,6	44,6
'67....	90,4	41,2	49,2	'58....	63,1	24,8	38,3
'66....	102,7	51,9	50,8	'57....	59,8	24,8	35,0

"The gold coinage has reached already 55½ million pounds and will have to be carried much further; and to carry it further by any considerable steps will reopen great difficulties in the European money markets. The large central banks will find increasing difficulty in the preservation of their bullion reserves from sudden and dangerous fluctuations, and the rates of interest therefore will have a tendency towards frequent stringency.

"The following Table gives, as in former years, a summary of the rates of discount prevailing at the principal European markets during the years 1870 and 1874:—

(VIII).—*European Rates of Discount*, 1870-74. *Average Annual Rates per Cent. per Annum, at Places as under for First Class Bills, being Abstract of Appendix* (C).

Places.	1874.		1873.		1872.		1871.		1870.	
	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.
	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt	Pr. cnt.	Per cnt.	Pr. cnt.	Per cnt.
London	3⅝	3½	4	4½	4½	4¼	3	2¾	3¼	3
Paris	4½	4	5¼	5	5¼	4½	6	—	—	—
Frankfort	3¾	3⅛	4¾	4½	4½	4	3¾	3½	—	—
Amsterdam	"	3½	4¾	4½	3½	3	3¼	3⅛	—	4¼
Hamburg	—	3½	—	4½	3½	3	4	3	—	3¼
Brussels	4½	4$\frac{1}{16}$	5	4¾	4	4	3½	3⅛	—	—
Berlin	4½	3¼	5	4½	4½	4	4½	3¾	—	4½
Vienna........	4⅞	4⅛	5¼	5¼	6	5¾	5¾	5½	—	5½
Petersburg	6	5⅞	6¼	6¼	6½	6½	7	6½	—	5¾
Turin	—	—	—	—	—	—	6	—	—	—
Madrid	—	—	—	—	—	—	5	—	—	—

"Table IX states the condition of four of the leading banks of Europe for the years 1873-74 and 1875:—

(IX).—*Leading Foreign Banks*, 1873. *Circulation and Bullion Reserve at Dates as under, being Summary of Appendix* (Ea) *in Million £.*

[00,000's omitted, thus 105,9 = 105,900,000*l.*]

Dates.	Bank of France.		Bank of Prussia.		Bank of Austria.		Bank of Belgium.	
	Cash.	Bullion.	Cash.	Bullion.	Cash.	Bullion.	Cash.	Bullion.
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
1875.								
1st January	105,9	52,8	41,1	30,8	30,1	14,0	13,3	4,9
1874.								
1st January	115,8	30,6	44,6	35,2	36,0	14,4	12,6	4,2
1st July....................	100,9	47,8	42,1	35,5	30,2	14,2	11,8	3,9
1873.								
1st January	111,5	31,7	45,5	27,6	32,5	14,2	11,7	4,7
1st March................	111,9	31,7	44,9	30,1	30,0	14,2	12,6	5,8
1st July....................	115,7	31,0	42,7	35,4	35,5	14,4	14,1	5,6
1st October	117,8	28,7	46,2	36,0	34,3	14,4	13,5	4,9
1st November	120,7	29,3	43,7	35,0	37,0	14,4	13,4	4,4
1st December	115,7	29,3	42,4	35,4	36,4	14,4	12,5	4,4

Note.—In Paris, through 1873, the price of gold varied from 2 to 9½ per mille prem., average, say 7¾ per mille prem.; in Austria, 8 per cent. prem.; in Petersburg, 12 per cent.; in Italy, 15 per cent.

"Since January, 1874, the Bank of France has increased its bullion reserve by 23 millions, or from 30 to 53 millions, and has reduced its circulation from 115 to 105 millions. The Bank of Russia has lost 5 millions of its bullion (from 35 to 30 millions), and the notes have gone down from 44 to 41. At Vienna the bullion remains the same, but the notes have fallen 6 millions (36 to 30). The great bullion movement of 1874 has been the steady absorption of gold by the Bank of France, and the directors of that establishment have manifested the highest skill and judgment in the way in which they have quietly and effectively accomplished their object of increasing the cash reserve. But between the necessity existing at Berlin to procure gold for coinage, and the policy at Paris to add bullion to the reserve, the money markets of Europe have been under constant apprehension.

"The following abstract (from official sources) of the bullion trade of France in 1874 is curious and suggestive. France has added 17½ millions sterling of *gold* to its previous stock in the largest degree from England and United States; and 14¾ millions *silver*, chiefly from Germany and Belgium. The process seems to have been for nearly all the *gold* brought to Europe to arrive in London. From London both Germany and France obtained their supplies of that metal. The balance of trade between France and

Germany and Belgium carried 11 millions sterling of *silver* into the first-named country:—

(X).—*France*, 1874, *Gold and Silver, Imports and Exports* (*per Statement of French Customs.*)

[0,000's omitted, thus 7,80 = 7,800,000*l.*]

Countries.	Gold.				Silver.			
	Imports from	Exports to	Imports.		Imports from	Exports to	Imports.	
			More.	Less.			More.	Less.
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
England	7,80	33	7,47	—	1,56	30	1,26	—
Germany	66	03	63	—	7,80	02	7,78	—
Belgium	1,46	06	1,40	—	3,22	06	3,16	—
Turkey	1,40	20	1,20	—	—	—	—	—
Egypt	35	1,32	—	97	—	—	—	—
United States	3,04	—	3,04	—	—	—	—	—
	14,70	2,94	13,74	97	12,58	38	12,20	—
All others	6,00	46	5,54	—	4,72	2,12	2,60	—
	20,70	3,40	17,30	—	17,30	2,50	14,80	—

"The railways have been able in 1874 partly to reduce their working expenses, in consequence of the fall in the price of coal and in other materials, and in some of the more ordinary kinds of labour; and the dividends have consequently been not so unfavourable as was expected. On the other hand, it is becoming clear that on nearly all the important lines there must be for some years large expenditure of capital, in order to accommodate the growing traffic. The companies have naturally put off every possible outlay during the period of high prices. But the necessity for the outlay remains, and has become more urgent, and will have to be met without delay. The Midland, Great Northern, and some of the companies having in their capital accounts numerous small stocks, the result of partial measures in the early years of the companies, are wisely consolidating them into stocks of a simpler and more extensive character, to the benefit and relief of the particular holders and of the general public. These processes of consolidation are in every sense desirable.

"The following table shows, in an instructive manner, the relative progress of the rates, or percentage, of increase of traffic and working expenses on the thirteen leading English lines for the four and a-half years ended 31st December, 1874. The second half of 1874 shows a decided turn in favour of the railways—the increase of expenses, which was 17·3 per cent. at December, 1873, had fallen to 3·8 per cent. in December, 1874.

"The result, however, of the four and a-half years had been sufficient severe upon the railways, viz., an increase of 81·0 per cent. in expenses against an increase of 54·3 per cent. in traffic.

(XI).—*Railways, Thirteen English Leading Lines. Gross Traffics and Working Expenses, Nine Half-Years,* 1870-74. *Percentages of Increase of each Half-Year over the Corresponding Half-Year of Previous Years* (*Economist, 27th February,* 1857).

Half-Years.		June Half-Years.		December Half-Years.		Whole Year.	
		Traffic Increase.	Working Expenses, Increase.	Traffic Increase.	Working Expenses, Increase.	Traffic Increase.	Working Expenses, Increase.
		Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
1870....	December	—	—	5·3	4·7	—	—
1871....	June	6·8	5·9	—	—	—	—
,, ...	December	—	—	9·2	7·7	16·0	13·4
1872....	June	8·3	11·4	—	—	—	—
,, ...	December	—	—	7·5	14·0	15·8	25·4
1873....	June	9·1	12·0	—	—	—	—
,, ...	December	—	—	8·5	17·3	17·6	29·3
1874....	June	3·3	9·0	—	—	—	—
,, ...	December	—	—	2·6	3·8	5·9	12·8
Total increase of 4½ years		27·5	38·3	33·1	47·5	54·3	81·0

Note.—This table is read thus:—The half-year June, 1871, showed over June, 1870, an increase of 6·8 per cent. in gross traffic, and 5·9 in working expenses; December, 1874, over December, 1873, showed 2·6 per cent. increase in traffic, and 3·8 per cent. in expenses.

"W. Fallows and Co. (Liverpool) report:—

"'*Iron.*—The year 1874 has been unsatisfactory to all connected with the iron trade. Merchants have been disappointed with the falling off in the export demand, manufacturers have suffered by a fall in prices, besides being embarrassed through troubles with labour, whilst the workmen have had to forego a considerable portion of the advance in wages obtained during the prosperous years of 1871 and 1872. Considering the extraordinary advance in prices of metals this reaction was not to be wondered at, and may be traced almost entirely to the reduced demand consequent thereon. It has been fortunate that this reaction was not aggravated *by any increase in production,* which is the very common result of a period of high prices; but, on the contrary, owing to strikes and other difficulties, the production of pig iron in 1873 and 1874 was considerably restricted, and this accounts for the small stocks which exist even in the present depressed state of trade. It has been otherwise with coal, the production of which *steadily increased* during the period of advancing prices, the figures being as follows:—1871, 117 million tons; 1872, 123 million tons; and 1873, 127 milllion tons. During 1874 a large number of *new pits* were opened, so that notwithstanding the restrictive influences at work during the year there has been a considerable reduction in the prices of coal and coke used in the manufacture of iron, and this, coupled with a reduction in the wages of iron workers, has led to a considerable fall in prices. It may be noted, however, that the fall in manufactured has been quite out of proportion to pig iron, the latter having been sustained through the limitation of production, which prevented any large accumulation of stock. No. 1 Gartsherrie pig iron fluctuated during the year between 113*s.* 6*d.* and 85*s.*, and No. 3 Middlesbro' between 87*s.* 6*d.* and 55*s.* In *manufactured iron*, rails have fallen from 10*l.* 10*s.* to 7*l.* *North Staffordshire crown iron*, 12*l.* to 9*l.* 5*s.*; *hoop iron*, 13*l.* 10*s.* to 11*l.*; and *sheet iron*, 14*l.* 10*s.* to 12*l.* 10*s.*

"'As wages have such an important connection with the price of iron, it is worth noting the changes which have taken place during the last three years. Starting with Midsummer, 1871, it may be assumed that the advanced in *colliers' wages* generally was not less than 50 to 60 per cent. (In Scotland the advance was greater, but late reductions have been in like proportion.) The reductions throughout the various districts, though neither uniform as regards time nor amount, may be estimated at about 20 to 25 per cent., so that wages now are probably about 25 per cent. to 30 per cent. *higher than the lowest rate paid prior to* 1871. The *puddlers and ironworkers* have submitted to *two* reductions of 10 per cent., which (less 2½ per cent. *advance* in July quarter) is equal to 17½ per cent. reduction during the year, and as a further reduction of 10 per cent. is announced, this will be a reduction in all of 27½ per cent. A reduction of 1*s.* per ton in puddling will bring the rate down to 9*s.* 9*d.* per ton, whilst by the 'Derby' agreement the minimum was fixed at 9*s.* 6*d.* per ton. The arrangement is terminable on 1st of July 1875, if desired.

"'*Colliers and Coal Price.*—An interesting comparison of the amount of work done by colliers now and ten years since is given by a correspondent of the *Leeds Mercury*, who states that in 1864 the average product of our coal mines gave for each person employed 327½ tons, which, for 313 working days, is equal 21½ cwts. for each person per day.

"'In 1868 the average product gives for each person 317 tons, which, for 313 working days, is equal to 20 cwts. for each person per day.

"'And in 1873 the average product gives for each person only 371 tons, which, for 313 days, is equal to 17½ cwts. for each person per day.

"'It will thus be seen that, in the first period of five years (1864 to 1868) there was a *diminished output per person* of about 7½ per cent.—21½ to 20 cwts. In the second period of five years (1869 to 1873) the output had *declined* by 12½ per cent.—20 to 17½ cwts. per day for each person. So in the ten years each person employed about a coal mine has reduced his labour by more than one-fifth —21½ to 17½ cwts. per day.

"'The writer is not prepared at present to state with accuracy what are the relative amounts of wages paid at those dates, but it is certainly in 1873 30 per cent. *more* for 20½ per cent. less work than in 1864, and it is not, therefore surprising that trade should now be so very unsatisfactory.'"

In accordance with the plan pursued in the *Journal* of the corresponding period of last year, the figures and facts embodied in the foregoing *résumé* have been borrowed bodily from the pages of the *Economist*—the highest existing English authority in the important subjects of which it treats. It was felt that any attempt to condense that which is already in the highest state of condensation might be disadvantageous, and diminish the value of the record for purposes of permanent reference.

IV.—*German Bank Act of the 30th January*, 1875.

In view of the importance of the subject, a full translation of this Act is here given:—

"1. *General Directions.*

"Section 1. The right of issuing notes can only be conferred by a law of the Empire; nor can any issue be extended beyond the sum fixed by the present Act except by a similar law. To the bank notes issued according to this Act are assimilated the State paper notes which have been transferred to a bank with a view to increase its working capital.

"Section 2. No one can be forced to accept bank notes tendered for payments which by law must be made in money; nor can the treasuries of the Empire be obliged to receive bank notes as payment by any provincial law.

"Section 3. Bank notes are only to be issued for amounts of one hundred, two hundred, five hundred, and one thousand marks, or a multiple of one thousand marks.

"Section 4. Every bank is bound to redeem its notes on presentation at their full nominal value. Banks are also bound to accept their notes at their full nominal value in payments, and that not only at the central establishment, but at all the branch offices. Every bank must redeem injured notes if the bearer present a part of the note larger than one-half, or if he prove that the larger part of the note, of which he only possesses the half or less, has been destroyed. The bank is not bound to redeem destroyed or lost notes.

"Section 5. Bank notes which have been paid into the tills of the bank, or of one of its branch offices, or to other places appointed for their redemption, are not to be reissued if they are soiled or damaged.

"Section 6. The calling in and withdrawal of the notes of a bank, or of any kind of bank notes, can only take place with the special permission or by order of the Federal Council. This order is made if a large part of the notes in circulation is known to be soiled or injured, or if the bank has lost the right of issue. The special permission can only be granted if it has been proved that forgeries of the notes to be called in have been put in circulation. In every case the Federal Council prescribes the mode, number, and times of publication of the notices for the withdrawal; the period within which and the places where the notes must be redeemed; the regulations for redeeming notes called in after expiry of the interval allowed; as well as any other measure which may appear necessary for the security of the holders of the notes. The regulations to be made by the Federal Council for these purposes will be published in the *Reichsgesetzblatt* (Bulletin des Lois).

"Section 7. No banks issuing notes has power—

"(1.) To accept bills of exchange.

"(2.) To buy or sell *on time*, either for its own account or for account of others, merchandise or stock exchange securities, or undertake to guarantee the fulfilment of such time transactions.

"Section 8. Banks issuing notes are bound to publish in the *Reichsanzeiger*, at their own expense—

"(1.) A statement of their assets and liabilities on the 7th, 15th, 23rd, and last day of each month, to be published at latest on the fifth day following these dates. (2.) An exact balance sheet of assets and liabilities, as well as the profit and loss account of the year, to be published at latest three months after the close of their business year. The weekly publication must specify the following amounts:—(1.) Under the head of *liabilities*—The subscribed capital; the reserve fund; the notes in circulation; the other liabilities on demand; the liabilities at notice; the remaining liabilities. (2.) Under the head of *assets*—The stock of coin and bullion (that is to say, the stock of German currency, and of gold in bars or foreign coin, reckoning a pound of fine gold at 1,392 marks);* the Reichskassenscheine (imperial legal tender notes); the notes of other banks; bills of exchange; Lombard advances (*i.e.* advances on securities); effects; the remaining assets. The Federal Council will decide which parts of the assets and liabilities in the year's balance sheet are to be specially shown. Both returns must specially mention the contingent liabilities upon inland bills of exchange which have passed into other hands.

"Section 9. Banks, whose note circulation exceeds their amount of cash, and the amount assigned to them in the subjoined list,† have to pay yearly to the Exchequer, on the excess, a tax of 5 per cent., to date from the 1st January, 1876. In calculating the tax the following items are to be reckoned as 'cash:'—Current German money, 'Reichskassenscheine,' notes of other German banks, and gold bars and foreign gold coin, calculated at the rate of 1,392 marks for a pound of gold.‡ If a bank lose the right of issuing notes (Section 49), its share in right of issue of uncovered notes *not* subject to taxation falls to the Imperial Bank.

"Section 10. For the purpose of determining the amount of tax due, the administration of each bank has to make out a statement of the total of the stock of cash and of the note circulation on the 7th, 15th, 23rd, and last of each month, and to submit this statement to the Imperial Controller. At the close of every year the controlling authorities will, upon the basis of these statements, determine the amount of tax to be paid by each bank, in the following number:—$\frac{5}{48}$ per cent. of the surplus of uncovered notes subject to the tax, as fixed in each of the different statements, is to be calculated as part of the tax; and the total of these separate tax 'debits' is the amount of tax which the bank has to pay to the Exchequer at latest on the 31st of January of the year following.

"Section 11. Foreign bank notes and other obligations of foreign corporations, companies, or private individuals, not yielding interest, and issued to bearer, are not to be used in payments, whether they are exclusively, or along with another valuation, issued in the currency of the Empire or in that of any German State.

"2. *Imperial Bank* (*Reichsbank*).

"Section 12. Under the control and direction of the Empire, a bank will be established, bearing the name of 'Reichsbank.' It will have the quality of a legal 'person' (juristische person) and the function of regulating the circulation of money in the whole of the German Empire, facilitating the settlement (clearing) of payments, and rendering useful disposable capital. The 'Reichsbank' will have its head office in Berlin, and is authorised to establish branch offices in any place in the Empire. The Federal Council may give the necessary orders for the establishment of such branch offices in certain places.

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* The pound mentioned here is the German pound.

† This "*subjoined list*" is the schedule at the end of the article which gives the limits assigned to each bank. This schedule must here be referred to, for in reality it is the most important part of the Act, as determining the limitation of the issues in the first instance.

‡ See above note.

"Section 13. The 'Reichsbank' is authorised to transact the following kinds of business:—(1.) To sell and buy gold and silver in bullion and coin. (2.) To discount, sell, and buy bills, whose currency does not exceed three months, and for which mostly *three*, and at least *two* persons, who are known to be solvent, answer; also obligations of the Empire, of any German State, or inland communal corporations, which are due at their nominal value at latest in three months' time. (3.) To give loans bearing interest for not longer than three months, and in exchange for moveable pledges (Lombard advances). These pledges comprise—(*a*) gold and silver in coin or bullion; (*b*) bonds of the Empire, or of any one state in Germany, of inland communal corporations, due to the bearer, which either yield interest, or else are due within a year; or bonds to bearer, yielding interest, which are guaranteed by the Empire, or else by one of the German States; fully paid shares, preference shares, and preference obligations of German railway companies whose lines are open for traffic; as also mortgage bonds of joint stock and co-operative mortgage banks, the latter standing under provincial, communal, or the State's control, to be accepted at most at three-fourths of their value; (*c*) bonds of foreign States to bearer, and yielding interest, and foreign railway preference obligations guaranteed by a State, to be accepted at most at 50 per cent. of their value; (*d*) Bills guaranteed by persons known as solvent, with a deduction of at least 5 per cent. of their value. (*e*) Pledged commercial goods lying in warehouse in the country to be accepted at most at two-thirds of their value. (4.) To buy and sell debentures within the condition given in 3 *b*; the instructions for the directors of the Imperial Bank will determine up to what amount the working capital of the bank may be invested in such debentures. (5.) To collect money on account of private persons, establishments, or officials; to make payments guaranteed beforehand; to give cheques and drafts on branch offices or correspondents. (6.) To buy the precious metals or effects of any kind if guaranteed beforehand, for third parties, and to sell them after due delivery. (7.) To accept money yielding interest or not, both as deposits and 'giro;' the amount of deposits bearing interest is not to exceed the capital of the bank and the reserve fund. (8.) To accept the charge and management of valuable goods.

"Section 14. The Bank of the German Empire shall be obliged to exchange its notes for bars at the price of 1,392 marks for a pound of gold, and shall be entitled to cause such bars to be assayed at the expense of the parties offering them, by experts appointed by the bank.

"Section 15. The Bank of the Empire has to publish the rate at which it discounts (Section 13–2), or gives loans on interest (Section 13–3). The returns of the week will have to be based on the books of the bank of the Empire, or of its immediate branch offices.

"Section 16. The Bank of the Empire is authorised to issue notes according to the requirements of its business. The fabrication, the emission, the withdrawal and destruction of these notes must take place under the control of the Commission for the debts of the Empire, to which a member named by the Emperor will be added for this occasion.

"Section 17. The Bank of the Empire is obliged to have in its coffers at least one-third of the amount of notes in circulation, in German currency, in legal tender notes of the Empire, in gold bars or foreign coins, valued at 1,392 marks for a pound of gold. The rest of the amount of notes in circulation must be represented by discounted bills, due at latest in three months, and for which generally three, but *at least* two, persons known to be solvent are responsible.

"Section 18. The Bank of the Empire is obliged to redeem its notes—(*a*) at the principal seat in Berlin, on presentation; (*b*) at the branch offices, as far as its means extend; in both cases in German currency.

"Section 19. The Bank of the Empire is obliged to accept as payment, at their full nominal value, the notes of all the banks contained in Section 48, and that not only in Berlin, but at all its branch offices established in towns with more than 80,000 inhabitants, and in the places where the bank which has issued the notes has its seat, but only as long as that bank strictly observes the regulations for the payment of notes. Notes accepted in this manner must either be presented for redemption, or employed for payments in the town where the bank in question has its seat, or in payments to the bank itself. The Bank of the Empire is empowered to make agreements with other German banks, by which these renounce their right of issuing notes.

"Section 20. Should the debtor of a loan received in the manner determined by Section 13–13 be in default, the bank has a right to have his pledge sold by one of its officials, or by a public auctioneer, without requiring the authorisation of the Court of Justice. Should the pledge have a bourse or market price, it may be sold otherwise than publicly, by an official, a broker, or any person entitled to sell by auction, at the price of the day, and from the proceeds the bank will receive its capital, interest, and expenses. The bank may make use of this right with other debtors also, and with the debtor's collateral securities.

"Section 21. The Bank of the Empire and its branch offices are exempt from income and trade taxes.

"Section 22. The Bank of the Empire is obliged gratuitously to accept payments for the Empire, and to make such up to the amount of the Empire's credit. It is authorised to take in charge the same business for the separate German States.

"Section 23. The capital of the Bank of the Empire amounts to *one hundred and twenty millions* of marks, divided into 40,000 shares of 3,000 marks each bearing names [(?) registered]. The shareholders are not personally answerable for the liabilities of the Bank of the Empire.

"Section 24. The net revenue, resulting at the close of every year, is to be used in the following manner:—(1.) The shareholders are first to receive a dividend, valued at 4½ per cent. of the capital. (2.) Of the rest, 20 per cent. is to be appropriated to the reserve fund, as long as the latter does not amount to one-fourth of the capital. (3.) One-half of the balance remaining is to be paid to the shareholders, as long as their dividends do not exceed 8 per cent., the other half goes to the Exchequer. Three-fourths of the further remaining amount goes to the Imperial Exchequer, one-fourth to the shareholders. Should the net revenue not amount to 4½ per cent. of the capital, the deficiency must be made up from the reserve fund. If the shares are issued at a premium above their nominal value, the amount so gained goes to the reserve fund. Due dividends fall under the right of prescription in favour of the bank, after four years, dated from the day when they are due.

"Section 25. The control belonging to the Government will be exercised by a 'Bank-Curatorium' (a sort of council of administration), to consist of the Chancellor of the Empire as president and four colleagues. One of these four members is named by the Emperor, the other three by the Federal Council. This 'Curatorium' will meet once a quarter and receive a report on the condition of the bank and on everything relating to it, and will also have communicated to it a general statement of accounts of all the business operations undertaken by the bank and the regulations made by it.

"Section 26. The part of the direction belonging to the Government will be exercised by the Imperial Chancellor, and under him by the Imperial Bank Directory; should the Chancellor be hindered from exercising his functions, the Emperor will name a substitute to replace him for the time. The Chancellor will direct the whole administration according to the rules of this Act, and the regulations which are to be published, according to Section 40. He will have to publish the directions for the Imperial Bank Directory, and for the branch offices, as well as the rules and instructions for the officials of the bank. He alone is authorised to introduce a change in any of these regulations and instructions.

"Section 27. The Imperial Bank Directory is the official authority by which the bank is administrated and actively represented. It consists of a president and a certain number of members; it will vote by a majority of voices, and will be subject to the directions of the Chancellor of the Empire in all questions of administration. The president and members of the bank directory will be appointed for life by the Emperor on a proposal from the Federal Council.

"Section 28. The officials of the Bank of the Empire will have the rights and duties of imperial functionaries. Their salaries, pensions, and other payments for their services, as well as the pensions and 'supports' for surviving relatives, are all to be borne by the bank. The rate of salary and pension for the Bank Directory will be determined yearly by the Budget of the Empire; that of the other officials by the Emperor, in agreement with the Federal Council, on a proposition from the Imperial Chancellor. No official of the bank is to be a holder of its shares.

"Section 29. The accounts of the Bank of the Empire must be submitted to the Court of Accounts of the German Empire. The Chancellor will determine in what form the yearly accounts are to be submitted. The Court of Accounts must, however, be consulted on the question of the directions to be given.

"Section 30. All the shareholders have a right to take a part in the administration of the bank by way of the general meetings, and besides that, by a committee chosen amongst them. They are, however, subject to the following rules:—

"Section 31. The central committee is the permanent representative of the shareholders in any business with the administration. It consists of fifteen members, besides whom fifteen substitutes are to be chosen. These members and substitutes are chosen from those amongst the shareholders who have *at least* three shares in their name. All these members and substitutes must reside within the Empire, and at least nine members and nine substitutes in Berlin. One-third of the members retire annually, but are eligible for re-election. The central committee meets at least once a month, presided over by the president of the bank directory, who may also call extraordinary meetings. The quorum at these meetings will be at least seven members; the detailed directions will determine *when* and in *what turn* the substitutes of members are called up.

"Section 32. The central committee will have submitted to it every month the weekly reports on the state of the discounts, bills, and loans, of the circulation of notes, the cash in hand, the deposits, purchase, and sale of gold, bills, and effects, and the distribution of funds to the branch offices. At the same time there will be communicated to it the results of both ordinary and extraordinary revisions of the bank's cash, as well as the opinions and proposals of the Bank Directory relating to the business of the bank in general and the needful regulations. The central committee may, above all, give its opinion upon the following points:—(*a*) Upon the balance and the accounts of profits which have been made up at the end of the twelve months by the bank directory, then submitted to the approbation of the Chancellor of the Empire, who has definitely settled them, and which are communicated to the shareholders in the general meeting. (*b*) Upon changes in the 'Etat' for salaries and pensions (Section 28). (*c*) Upon appointments to vacant places in the bank directory, the president's place excepted. In this question the central committee is to be consulted before the Federal Council comes to a decision (Section 27). (*d*) Upon the amount up to which the funds of the bank may be used in loans. The purchase of effects can only be made in the name of the bank, when the sum of the amount up to which the bank's funds may be used for this purpose has been settled with the approbation of the central committee. (*e*) Upon the rate of discount and the interest of loans, as well as upon changes in the principles and the terms on which credit is given. (*f*) Upon agreements with other German banks (Section 19), and upon the principles to be observed in the relations with these banks. General directions and instructions to the officials must be communicated to the central committee as soon as they have been published (Section 26).

"Section 33. The members of the central committee will receive no remuneration for their services. Should a member of the committee betray the secrets of the bank (Section 39), should he make a bad use of any information he has received in his quality as such, or should he have lost public confidence through any cause whatsoever, or if he appears to endanger the interests of the establishment in any way, he may be excluded from the committee by the general meeting. A bankrupt member of the committee, a member who does not appear at the meeting for six months, or one who ceases to fulfil the conditions necessary to his being elected (Section 31), will be considered no longer a member.

"Section 34. The continuous special control over the administration of the bank, will be exercised by three deputies chosen from the Central Committee for the duration of one year, and by as many substitutes for the deputies. The detailed regulations will determine *when and in which turn* the substitutes are to be called up. The deputies have the right of being present and of pronouncing their opinion at all the meetings of the Bank Directory. They have further the right and the duty to look into the course of business, and the books and portfolios, in the presence of a member of the Bank Directory, and in the usual business hours, and to be present at the ordinary and extraordinary revisions of the bank's cash. They will report on what they have done, in the monthly meetings of the central committee. Should a deputy be in the situation indicated by Section 33, part 2, the central committee may suspend him without waiting for the consent of the general meeting.

"Section 35. The bank may carry on business with the finance administrations of the Empire or the German Federal States, only within the limits drawn by this Act or by the Bank Statutes, and, should any business not come within the general conditions of bank business, it must be submitted to the approbation of the deputies. If only one of these object, it must be laid before the Central Committee. The business may not be done if a legal majority of the Central Committee has not approved it.

"Section 36. The Federal Council has to determine where the Imperial Bank head offices have to be established, besides the one chief seat of the bank. These are to be under a Directory, consisting of two members at least, and under the control of a Bank Commissary, named by the Emperor. Each Imperial Bank head office should, if there is a sufficient number of shareholders in the place, be provided with a provincial committee, whose members are chosen by the Chancellor of the Empire from a list of shareholders proposed by the Bank Commissary and the central committee. The shareholders must reside at the place where the head office is established, or else in its immediate neighbourhood. This Committee will hold monthly meetings, in which the reports on the business of the head office, and the directions given by the central administration will be communicated to it. Any proposals or motions which the district committee should feel inclined to make, and which the Directory of the head office cannot agree to, must be presented to the Chancellor in a report. The continuous special control over the course of business at the head offices of the bank will be exercised (as in Section 34), so far as it does not interfere with the daily business, by two or three deputies, chosen by the provincial committee from amongst its own members, or, where there is no provincial committee, named by the Chancellor of the Empire.

"Section 37. All other branch offices which come under the immediate control of the Bank Directory of the Empire will be established by the Chancellor himself; those which are to be under the control of another branch office will be established by the Bank Directory.

"Section 38. The Bank of the Empire will have to be responsible for the signature of the Bank Directory of the Empire, or of one of the head offices, even in cases where law prescribes a special authorisation for these signatures. These must, however, be made by two members of the Bank Directory, or by two members of the Board of Directors of the head offices, or else by their substitutes. The Chancellor will separately publish detailed regulations as to what conditions and in what form the signatures of the bank officers are to be obligatory on the Bank of the Empire. Any suit against the business of the bank, head offices, or of branch offices may be addressed to the court of justice of the place at which the branch office is established.

"Section 39. All the persons attached to the bank, such as officials, members of the committee, deputies, are bound to keep silence on all business matters of the bank, especially on business with private persons, or regarding the credit afforded to these. The deputies from the central committee and their substitutes, as well as the committee of the local head offices, must promise as much, by a shake of the hand in lieu of an oath.

"Section 40. The statutes for the Bank of the Empire will be published according to Sections 12 to 39, by the Emperor after a previous agreement with the Federal Council. These statutes must contain regulations on the following subjects:—(1.) The form of the shares and of the 'coupons' and 'talons' belonging to them. (2.) The forms to be observed at the transfer or seizure of shares. (3.) The mortification [(?) cancelling] of lost shares, lost 'coupons,' or 'talons,' as well as the disposal of the 'coupons' and 'talons' belonging to such shares. (4.) The principles on which the yearly balance of the Bank of the Empire must be struck. (5.) The term and 'modality' for the payment of the dividends. (6.) The form in which the general meetings are assembled, and the conditions and mode of voting of the shareholders; no conditions, however, are to exclude the holder of one share from giving his vote, nor may more than 100 votes be centred in one person.

(7.) The 'modalities' for the election of the central committee, and of the deputies for the same, and of the district committees and their deputies. (8.) The form to be observed in the announcements made by the company, and the public papers in which they are to be inserted. (9.) The liquidation of the Bank of the Empire, which would follow the dissolution of the bank (Section 41). (10.) The way in which the shareholders or their representative committee should co-operate in increasing the capital to an amount fixed by Imperial Act. (11.) The conditions of security under which purchases and sales of effects may be made by the bank for the account of others.

"Section 41. The Imperial Government will, on the 1st January, 1891, have the power—(*a*) to abolish the bank established according to this Act, and acquire the pieces of land in its possession, according to their value in the books; or (*b*) to acquire the shares at their nominal value. This right will be renewed every ten years. Should the right be made use of, one year's warning must be given by the Chancellor to the Bank Directory, in the form of an Imperial decree, which has received the approbation of the Federal Council, and which the Bank Directory is to publish. In both cases the reserve fund, which will not be required to cover losses, goes half to the shareholders, half to the Exchequer. For a prolongation in this question it will be necessary to obtain the authorisation of the Reichstag.

"3.—*Private Note Banks.*

"Section 42. Banks, which are in the possession of the right of issuing notes at the period of this Act's publication, are not allowed to carry on business, nor to have business carried on by agents on their account, nor to enter as partners in banks, in any other State than that in which the right has been granted.

"Section 43. The notes of banks which have the power to issue, at the time of publishing this Act, are not to be used as payments in any other State than in that where the right has been granted. Such notes may, however, be exchanged for other bank notes, paper money, or cash.

"Section 44. The restrictions contained in Section 43 need not be applied to banks which fulfil the following conditions by the 1st January, 1876:—(1.) The bank may invest its working capital only in business contained in Section 13, from 1 to 4, especially in point 4, and at most to the amount of one-half of the capital and the reserve fund. The last term for conforming its loan business to the regulations contained in Section 13, No. 3, is fixed at the 1st January, 1877. The bank must publish at certain periods its rate of discount, and the percentage at which it gives loans. (2.) The bank must put aside 20 per cent. of its annual net profits above 4½ per cent. for a reserve fund, as long as that reserve fund does not amount to one-fourth of the capital of the bank. (3.) The bank is obliged to have in its coffers one-third of the amount of its notes in circulation, either in German currency, or in legal tender notes of the Empire, or in gold bars or foreign coins, 1 pound of gold valued at 1,392 marks. The rest of the amount of notes in circulation must be represented by discounted bills, due at latest in three months, and for which, as a rule, three, and *at least* two, persons known as solvent are responsible. (4.) The bank is obliged to redeem its notes in German currency at a place in Berlin or Frankfort, which must have been approved of by the Federal Council. The notes must be redeemed at latest on the day following their presentation. (5.) The bank is obliged to accept, as payment at their nominal value, all German bank notes which have a privilege of circulation in the Empire, and that not only at its chief seat, but at all the branch offices established in towns with more than 80,000 inhabitants, as long as the banks which have issued these notes strictly observe the regulations for the payment of notes. The notes of other banks accepted in this manner can only be used either in presentation for redemption, or as payments in the town where the bank which has issued them has its seat, or as payment of the bank itself. (6.) The bank must promise not to use the right of objection it may possess with reference to the privilege of issue granted to other banks, or to the measure by which the Government of a State ceases to accept its notes as cash at the public pay-places. (7.) The bank must consent to have its right of issue granted according to Section 41, withdrawn at one year's notice, either by the Government or the Federal Council, and without any indemnification whatever. The Federal Council is to withdraw the right of issue only for the purpose of bringing order and uniformity into banking affairs, or else when a bank has not conformed to this Act. The right of decision in this question belongs to the Federal Council. A bank which fulfils all these conditions, from 1 to 7, will have a right to carry on business in branch offices, or agencies beyond the territory determined in Section 42, if the government of the province in which the bank has its seat, obtains the consent of the Federal Council. The banks which can prove by the 1st January, 1876, that their lawful issue of notes does not exceed the capital paid in on the 1st January, 1874, are not bound to fulfil the condition contained in (2), they may at once circulate their notes, and establish branch offices and agencies carrying on business in the whole Empire. The Federal Council has the power to grant these banks for undetermined periods, the right of giving credit in a way forbidden by (1), if they have been in possession of this right before. The Federal Council will also determine the conditions necessary in such a case.

"Section 45. Banks intending to make use of the regulations contained in Section 44, must prove to the Chancellor of the Empire:—(1.) That their statutes comply with the conditions contained in Section 44. (2.) That the appointed office for the redemption of notes has been established. When both these points have been proved, the Chancellor of the Empire publishes in the official paper what follows:—(*a*) That the restrictions contained in Sections 42 and 43, or in Section 43 alone, are not applicable to the bank in question. (*b*) The place at which the office has been established which redeems the notes of this bank.

"Section 46. In cases where the term of duration of a bank's right to issue notes can be limited by the Government or any other public authority, this Act must be regarded as giving notice of such limitation at the shortest lawful term. This regulation is of course not valid for banks whose notes in circulation do not exceed their capital paid in on the 1st January, 1874, and which fulfil the conditions contained in Section 44, 1 to 7. Those statutes and dispositions which make the duration of a bank, or of its right of issue dependent on the existence and the right to issue notes of the Prussian Bank, are repealed.

"Section 47. Any change in the fundamental law, the statutes, or privileges of a bank, which is already in the possession of the right to issue notes, must be submitted to the approval of the Federal Council, if it regards the capital, the reserve funds, the business limits, the security against issued notes, or the duration of the right of issue. Lawful dispositions, or concessions of particular states, by which a bank is limited in the right of carrying on the business of discount, loans, and deposits, are not prohibited by the above regulation if they are not contained in one of the clauses of this Act. The approval of the Federal Council can be obtained through an application from the Government of the State in which the bank in question has its seat; it will be refused if the bank does not comply with the dispositions contained in Section 44. The Government of Bavaria has the power to extend the right of issue of the Bavarian note-bank up to the maximum amount of 70,000,000 of marks' worth of notes. The said Government can invest any other bank with this right, if it conform to the regulations contained in Section 44.

"Section 48. The Chancellor of the Empire is authorised to examine, with the help of commissioners, into the books, the offices, and coffers of banks which issue notes, at any time, to ascertain whether the regulations of this Act are being followed, whether the conditions necessary to exempt a bank from Sections 42 and 43, or from Section 43 alone, have been fulfilled, and whether the weekly and yearly reports (Section 8), or the reports necessary for the valuation of taxes (Section 10), correspond to the real state of affairs. The right of control due to the Governments of the separate States is not interfered with by this regulation.

"Section 49. The right of issue will be forfeited in the following cases:—(1.) If the term for which it has been granted has expired. (2.) If the bank renounce its right. (3.) In case of bankruptcy, on the day the proceedings commence. (4.) If the right be withdrawn by the verdict of a court of justice. (5.) By the decision of a State Government, according to the regulations of the Statutes or concessions.

"Section 50. The right of issuing notes can be withdrawn by the verdict of a court of justice on complaint of the Chancellor, or the Government of the German States, in which the bank in question has its seat in the following cases:—(1.) When the directions contained in the Statutes, the concessions, or in this Act, relating to the 'covering' of notes in circulation have been violated, or the amount of notes in circulation as it is determined by the Statutes, the concessions, or this Act, has been exceeded. (2.) When the bank in question carries on business which is forbidden in Section 42, or when it circulates its notes beyond the territory assigned it in Section 43, before the Chancellor's publication contained in Section 45 has been publicly made known. (3.) When the bank does not redeem notes presented at its tills—(*a*) at the chief seat of the bank on the day of presentation; (*b*) at the place of redemption (as in Section 44–4) within twenty-four hours following the day of presentation; (*c*) at other places of redemption appointed as such by the Statutes of the bank, within three days from the day of presentation. (4.) When the capital of the bank has been diminished one-third by losses, the action must be carried on in the usual form of law proceedings. Lawsuits of this kind will come under the heading commercial business, contained in the Imperial Code of Law. The judgment must also contain an order for the withdrawal of all notes in circulation.

"Section 51. The judgment is not to be executed before it has obtained lawful validity. The execution will be performed by the competent court of justice. The court will determine for this purpose the period within which the bank must publish the notice announçing the withdrawal of its notes. If the bank is not bankrupt the court will name a trustee, whose business it will be to oversee the withdrawal of notes and to demand the liquidation of the bank at the hands of the court of justice, if it fails to obey the orders prescribed in such a case. All the withdrawn notes of the bank must be consigned to a pay-place appointed at the place where the bank has its seat, by the Chancellor of the Empire.

"Section 52. Six months after the sentence has obtained lawful validity (Section 50), the bank must deposit at the pay-place a sum of money amounting to the sum of the notes not yet deposited. This sum of money will be returned to the bank as it goes on depositing the notes out, and the residue will be returned on the day fixed by the Federal Council as the last term for the withdrawal of notes.

"Section 53. The notes deposited, as mentioned in Sections 51 and 52, will be destroyed in the presence of the trustees of the bank, and also of the trustee of the Treasury where the notes are deposited. A judicial or notarial protocol will be drawn up relating to the destruction of the notes. The administration of the bank may send two deputies to be present at the act of destruction. The day fixed for the destruction must be made known to the bank eight days before it takes place. It may take place all at once or at different times.

"Section 54. All those corporations which, without being issue-banks, are in possession of the right to issue notes, or bonds, or other obligations without interest, due to the bearer, are bound to fulfil the conditions contained in Sections 2 to 6 inclusively, in Section 43, and in Section 47, Part I of this Act, so long as they intend continuing to have paper money in circulation, and so far as these regulations relate to the permission to issue paper money, the duration of the privilege and the security against the issue.

"4.—*Penal Directions.*

"Section 55. Whosoever issues notes or other obligations, without interest, without the right to do so, will be subject to a fine of ten times the amount of the paper he issued, and *at least* 5,000 marks, if the paper issued does not amount to the tenth part of this sum.

"Section 56. Whosoever pays with notes or other paper money belonging to *inland* banks or corporations beyond the territory appointed for their circulation in Section 43, will be fined in a sum of money, which may not, however, exceed 150 marks.

"Section 57. Whosoever, contrary to the directions contained in Section 11, pays with foreign notes or other obligations without interest, belonging to *foreign* banks, corporations, companies, or private individuals, and which are valued in currency of the Empire, or else in other German currency, will have to pay a fine varying from 50 marks to 5,000 marks. If it be proved that transgressions of this kind are practised as a trade, imprisonment for one year or less, may be added to the fine. The mere attempt to transgress is subject to punishment.

"Section 58. Whosoever carries on bank business as director of a branch office, or as agent, or enters into partnership with one bank in the name of another, notwithstanding the prohibition of Section 42, will be fined up to 5,000 marks. The same fine will have to be paid by the members of a bank directory who do not comply with the regulations contained in Section 7, or who disobey the rules contained in Section 42, by—(*a*) establishing branch offices or agencies; (*b*) or letting their banks participate in the partnership of other banks.

"Section 59. The members of a bank directory will be punished with three months' imprisonment if they misrepresent the conditions of the bank in the report they have to publish according to the dispositions contained in Section 8. They will be punished with a fine amounting to ten times the sum of the tax embezzled, and to a minimum of 500 marks, if they do not declare the whole of the amount of notes subject to taxation in the report which they must make according to Section 10. If the bank issues more notes than it has a right to issue, they will be punished with a fine amounting to ten times the sum which the excess amounts to, or a minimum of 5,000 marks. This punishment will also be undergone by the directors of corporations who are in the possession of the right to issue obligations without interest, if they issue more paper money than they are authorised to issue.

"V. *Conclusion.*

"Section 60. The regulations contained in Sections 6, 42, and 43, and the penal directions relating to them, and contained in Sections 56 and 58 of the present Act, will come into force on 1st January, 1876.

"Section 61. The Chancellor of the Empire is authorised to conclude a treaty with the Prussian Government, by which the latter cedes the Prussian Bank to the Empire. This treaty must be founded on the following basis:—(1.) Prussia cedes the Prussian Bank to the Empire after having withdrawn its advanced capital, amounting to 1,906,800 thalers and one-half of the reserve funds. Along with the bank, the Prussian Government will cede all its corresponding rights and obligations, from the 1st January, 1876, under the conditions following, and numbered 2 to 6. The Empire will convert this bank into the Imperial Bank, to be established according to the provisions of this Act. (2.) For the cession of its Bank Prussia will receive an indemnity or fifteen million of marks to be provided by the Bank of the Empire. (3.) The shareholders of the Prussian Bank will have the right to exchange their shares of the Prussian Bank for shares of the same nominal value of the Bank of the Empire, if they consent to renounce their rights in favour of the latter establishment. (4.) The Bank of the Empire must return the advanced capital and the amount due from the reserved funds, to those shareholders who demand as much; this right being guaranteed to them by the Sections 16 and 19 of the Bank Regulations of the 5th October, 1846 (Prussian Code of Law, p. 435). (5.) The 'Reichsbank' has to undertake the liabilities which the Prussian Bank took upon itself in the treaty of the 28/31 January, 1856, with regard to the Government's loan of sixteen millions and five hundred and eighty-nine thousand thalers (16,589,000). For this purpose the 'Reichsbank' will have to pay to Prussia for the years 1876 to 1925 inclusively, 621,930 thaler yearly, in two instalments each year. If the concession of the bank of the Empire is not renewed, the German Government will take care that the instalments are paid to the Prussian Exchequer up to the time when another bank acquires the Imperial Bank's rights and liabilities. (6.) The agreement between Prussia and the bank of the Empire regarding the real estate of the Prussian Bank has as yet to be made.

"Section 62. The Chancellor of the Empire is authorised—(1.) to issue those shares which are not exchanged for shares of the Prussian Bank as mentioned in Sections 61, No. 3; (2.) to issue Treasury notes (Exchequer bills) *with interest* to the amount of the shares not issued, in order to procure the capital necessary for the bank of the Empire, according to Section 23. These obligations must be due at latest on the 1st May, 1876.

"Section 63. The fabrication of these Treasury notes (*bons du trésor*), (contained in Section 62, No. 2) will be entrusted to the administration of the National Debt. The Chancellor of the Empire fixes the rate of interest. Up to the 1st May, 1876, the amount of Treasury notes may be renewed by the Chancellor's decree, but only as a covering for those already in circulation.

"Section 64. The sums necessary for the interest and the redemption of these

Exchequer bills must be found by the Administration of the National Debt from revenues of the Empire, at the time when they are due.

"Section 65. The issue of these Treasury notes will be made by the Exchequer. The interest of the Treasury notes falls under the right of prescription after a period of four years, the subscribed capital shares after a period of thirty years, from the day on which the Treasury notes are due.

"Section 66. The directions contained in the Code of Commerce regarding inscription in the commercial register, and the legal consequences where this measure has been neglected, are not to be in force with regard to the Bank of the Empire."

	List of Banks.	Uncovered Circulation of Notes. Marks.
1.	Imperial Bank	250,000,000
2.	Landlord's Private Bank in Pomerania (Stettin)	1,222,000
3.	Town Bank in Breslau	1,283,000
4.	Bank of the Berlin Kassenverein	963,000
5.	Cologne Bank	1,251,000
6.	Magdeburg Private Bank	1,173,000
7.	Danzig Private Share Bank	1,272,000
8.	Provincial Share Bank of Grand Duchy of Posen	1,206,000
9.	Commercial Bank for Prussian Oberlausitz (Gorlitz)	1,307,000
10.	Hanoverian Bank	6,000,000
11.	Provincial Bank (Landes Bank) of Langrave of Hesse	159,000
12.	Frankfurt Bank	10,000,000
13.	Bavarian Banks	32,000,000
14.	Saxon Bank at Dresden	16,771,000
15.	Leipzig Bank	5,348,000
16.	Leipzig Kassenverein	1,440,000
17.	Chemnitz Town Bank	441,000
18.	Wurtemberg Note Bank	10,000,000
19.	Baden Bank	10,000,000
20.	Bank for South Germany	10,000,000
21.	Rostock Bank	1,155,000
22.	Weimar Bank	1,971,000
23.	Oldenburg State Bank	1,881,000
24.	Brunswick Bank	2,829,000
25.	Central German Credit Bank in Meiningen	3,187,000
26.	Private Bank at Gotha	1,344,000
27.	Anhalt-Dessau State Bank	935,000
28.	Thuringian Bank (Sondershausen)	1,658,000
29.	Gera Bank	1,651,000
30.	Lower Saxon Bank (Bückeburg)	594,000
31.	Lübeck Private Bank	500,000
32.	Commerzbank in Lübeck	959,000
33.	Bremer Bank	4,500,000
	Total	385,000,000

The following notes, in which the chief points of the new German Act are compared with the English Act of 1844, are furnished by Mr. Ernest Seyd, F.S.S.:—

The new German Banking Law, a full translation of which is herewith given, resembles our own Act of 1844 in some respects, but is essentially different in others. In the same way as Sir Robert Peel limited the issue of fiduciary banknotes by the Bank of England and the privileged provincial banks, so does this German law restrict and limit the issues of the Imperial German Bank and the different small State and joint stock banks to the respective sums assigned to each in the list appended to the Act.

The Imperial Bank (or, properly speaking, the Empire Bank, "Reichsbank") will in future hold a position akin to that of the Bank of England, apart from the provincial banks of issue. Leaving the comparison between the Imperial Bank and the Bank of England for consideration later on, it may, just at this moment, whilst a Select Committee of the House of Commons is inquiring into our own provincial issues, be of interest to us to see how the Germans treat this matter.

Under Sir Robert Peel's Act the total *fiduciary* issue of English, Irish, and Scotch provincial banks is limited to 15,857,000*l.*, the English being 6,713,000*l.*, the Irish, 6,354,000*l.*, the Scottish 2,789,000*l.* The English issues cannot be extended beyond the above fixed amount, but the Irish and Scottish Banks may hold gold and silver coin in due proportions for any surplus issue. This is just one of the anomalies which the committee has under consideration. The German law prescribes to the whole of the provincial banks a *first* limit of fiduciary issue of a total of 135,000,000 marks (after deducting 250 million marks for the Imperial Bank), equal to 6,750,000*l.*, against our 15,800,000*l.* That is to say: the German provincial banks may issue 6,750,000*l.* in fiduciary notes, and for the surplus above this they must have cash, either gold, or State or other bank notes. (Such other notes are those of other banks which may happen to come into their tills.) So far the arrangement resembles our Scotch issues, which, as before said, can also be increased by more gold. But this allowance of 6,750,000*l.* *uncovered* notes of the German banks, is only what may be called the *first limit.* Our total limit of 15,800,000*l.* is so far the final allowance of uncovered issue, the German law admits of further extension of issue on credit. Each bank can issue its share of the first limit without paying any tax whatever to the State; but it *may exceed* that limit provided it pays to the State a tax of *five per cent. per annum* on such excess issue (see Section 9). Such over-issue, however, must not exceed a proportion of one-third to be held against it in cash (see Section 44).

This curious provision gave rise to much discussion, the Government insisting that so heavy a tax as 5 per cent. would check excess, others alleging that over-issue would be encouraged, and great variations in interest take place. The principle of extension so adopted is a rough one, and, as a matter of course, contrary to the spirit of Sir Robert Peel's Act; for it will enable notes to take the place of bullion when bullion is absolutely required, and thus defeat the sound action of limitation. The privilege of note issue acquired by the German provincial banks, as the perusal of the clauses show, is otherwise so hemmed in by all sorts of restrictions as to their business of banking, that many of them have already declared their willingness to surrender it to the Imperial Bank. It remains to be remarked that these banks cannot issue notes in future of less than 100 marks, or 5*l.* The State itself, under a law passed in April last year, will issue 120 millions of marks in *State notes* of smaller amounts.

The Imperial Bank itself will become the great centre of the German valuation. It must be the business of that institution to act in a manner similar to that of the Bank of England, viz., in the first instance, to secure as much gold as the valuation requires, and that can only be done by limiting the amount of fiduciary issue. Sir Robert Peel's fiduciary allowance is the 15 millions which the Bank of England issues on securities, all the rest of the issue must be made on bullion. The German law takes the same bullion basis, but in lieu of our 15,000,000*l.* of issue, it assigns but an issue of 12,500,000*l.*, or 250 millions of marks for this purpose. As the circulation of the Imperial note will amount to about 40,000,000*l.* against 25,000,000*l.* of Bank of England notes, this allowance of 12½ millions would seem a narrow one. But just as in the case of the other banks, if the Imperial Bank desires to issue more than 12½ millions of notes above bullion, it can do so on paying 5 per cent. per annum tax to the State, provided that it never has less than one-third of cash in its coffers. Our Bank of England issue is strictly limited by the allowance of 15 millions and *no more* (excepting by suspension of the Act); the Imperial German issue is, so to speak, trebly limited. The first limitation is by way of the narrow allowance of 12½ millions; next to this comes the limiting and checking power of the tax of 5 per cent., and the final limit is the one-third or 33⅓ per cent. of cash. When we consider that, in 1857 for instance, our own bullion, on a circulation of 21 millions, fell to 6 millions or about 26 per cent., there is, considering the previous safeguards in the German law, nothing dangerous in such final extreme limit as 33⅓ per cent. of bullion. Nevertheless, the principle of extension so adopted is again contrary to Sir Robert Peel's Act, and is unhealthy in its nature. It gave rise to stormy discussion; the management of the bank itself strenuously opposed a measure which subjected the great State bank to the prospect of the indignity of having to pay 5 per cent. per annum tax to the Government, *quasi* by way of penalty. Imagine what would be the case here, if the money market were compelled suddenly to pay 5 per cent. interest to the State at times when interest is already high. The Ministry nevertheless succeeded in carrying this extraordinary measure.

The Imperial Bank may possibly be able to manage its issue under its *first* limit of 12½ alone, without incurring the penalty of the 5 per cent. tax. And here an essential difference between the manner in which our own fiduciary Bank of England allowance of 15 millions, and the German allowance of 12½ millions, will be treated, may be pointed out. The Bank of England issues these 15 millions *permanently*, whether there be much or little bullion, whether the circulation requires them or not. The German Bank will issue the 12½ millions only *when wanted*, and not permanently. That is to say, both allowances are to be equally ready and available, but whilst our English system thus creates a surplus of actual legal tender *money in reserve*, the German issue, will have an equally available *issue in reserve*. It is alleged that in the former case money is rendered unduly cheap and that such surplus of legal tender notes has the tendency of opposing and lessening bullion, leading to extremely low and subsequent high rates; whereas the mere issue in reserve remains neutral and gives more equal rates of interest. The German economical press considered that the great variations in bullion and rates of interest in England were mainly due to the maintenance of the fiduciary issue of 15 millions as both *minimum* and *maximum*, whereas such issue should only be *maximum*.

The perusal of the translation of the Act will enlighten the reader on many minor details connected with the German policy of banking. The clauses providing for the management and its appointment seem to indicate that the Imperial Bank will be a kind of Government institution; but the real life of the bank, as far as active banking in discounts and advances is concerned, must be conducted with due regard to the stockholders. and will therefore have the same unofficial and private character as that of the banks of England and France. As a specimen of "framing" a law it is a very great curiosity, and the most severe criticism has been passed upon the manner in which it is strung together.

The most important part of the Act, that which will affect us most, is the fixed price which the Imperial Bank will in future pay for gold. Hitherto the German Government not only exacted a very high mint charge (of ½ per cent.), but actually closed the mint to the public Hence the Imperial Bank was unable to buy gold in the international markets at a fair exchange. The more or less sudden purchases of gold made for account of Germany here and elsewhere, took place almost at the caprice of the Government, frequently against the exchanges. In future these purchases will go their regular way in accord with the rules of supply and demand and the true state of the exchanges. Section 14 provides that the Bank shall purchase gold against its notes at the rate of 1,392 marks per mint pound fine. The full mint price being 1,395 marks, the charge is equal to 2·158 pro mille. Our full mint price is 3*l.* 17*s.* 10½*d.* per oz. standard, and the Bank of England buys at 3*l.* 17*s.* 9*d.*, the 1½*d.* being equal to 1·605 pro mille; but inasmuch as our other technical expenses are higher than in France and Germany, a comparison of the total cost of realisation on a bar of 200 oz. will show the following results :—

	Pro Mille.	
Charges in England—		
1½*d.* per oz.	1·605	
Assays $\frac{1}{5000}$ths fine	0·165	
Turn of scale	0·062	
Cost of assay 4*s.* 6*d.*	0·265	
	2·097	
Cost of melting	0·245	
	2·342	per mille.
Charges in France—		
6·70 frs. per kilo. 900 fine	2·161	
Assays $\frac{1}{10000}$ths fine	0·050	
Turn of scale	0·008	
Cost of assay (1·50 frs.)	0·077	
	2·296	per mille.
Charges in Germany—		
3 marks per pound, 1,000 fine	2·151	
Assays $\frac{1}{10000}$ths fine	0·050	
Turn of scale	0·008	
Cost of assay (1½ marks)	0·096	
	2·305	per mille.

As we in England always insist upon remelting bars, by which a loss of from 0·5 to 0·7 pro mille is incurred, it will be seen that the French and German charges of converting gold into notes or coin are slightly more favourable than ours.

In future Germany will accordingly become an effective and regular competitor with us and with France in the international exchange market, and this, as time will show, will have an important influence on the features of international banking generally.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—Quarter ended December, 1874.

BIRTHS and DEATHS—Quarter ended March, 1875.

A.—*Serial Table of* Marriages, Births, *and* Deaths, *returned in the Years* 1875-69, *and in the* Quarters *of those Years.*

Calendar Years, 1875-69:—*Numbers.*

Years	'75.	'74.	'73.	'72.	'71.	'70.	'69.
Marriages No.	—	201,605	205,615	201,267	190,112	181,655	176,970
Births........ ,,	—	854,307	829,778	825,907	797,428	792,787	773,381
Deaths .... ,,	—	526,701	492,520	492,265	514,879	515,329	494,828

Quarters *of each Calendar Year,* 1875-69.

(I.) Marriages:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........No.	—	41,417	41,217	40,539	36,305	36,455	37,752
June .... ,,	—	52,737	53,408	50,380	48,831	46,720	43,202
September ,,	—	49,014	49,709	49,818	46,536	43,900	43,978
December ,,	—	58,437	61,281	60,530	58,440	54,580	52,038

(II.) Births:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........No.	215,251	214,437	215,744	208,752	209,523	206,366	203,775
June .... ,,	—	217,605	206,516	208,790	201,165	203,615	188,618
September ,,	—	209,898	204,167	201,746	193,271	192,521	190,394
December ,,	—	212,367	203,351	206,619	193,469	190,285	190,594

(III.) Deaths:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........No.	162,514	136,528	132,432	134,952	138,393	143,773	133,096
June .... ,,	—	123,990	118,582	120,835	120,793	121,128	118,947
September ,,	—	124,099	114,676	118,927	121,332	124,297	114,644
December ,,	—	142,084	126,830	117,551	134,361	126,131	128,141

Annual Rates of MARRIAGES, BIRTHS, *and* DEATHS, *per* 1,000 PERSONS LIVING *in the Years* 1875-69, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1875-69:—*General Ratios.*

YEARS............	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
Estmtd. Popln. of England *in thousands* in middle of each Year....	23,944,	—	23,649,	23,356,	23,068,	22,783,	22,501,	22,223,
Persons Married	—	16·9	17·1	17·6	17·5	16·7	16·1	15·9
Births	—	35·4	36·1	35·5	35·8	35·0	35·2	34·8
Deaths................	—	22·3	22·3	21·1	21·3	22·6	22·9	22·3

QUARTERS *of each Calendar Year*, 1875-69.

(I.) PERSONS MARRIED :—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	—	13·8	14·2	14·3	14·1	12·9	13·2	13·8
June....................	—	17·2	17·9	18·3	17·5	17·2	16·7	15·6
September	—	16·4	16·4	16·9	17·1	16·2	15·5	15·7
December	—	20·0	19·6	20·8	20·8	20·4	19·2	18·6

(II.) BIRTHS:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	36·5	37·0	36·8	37·5	36·3	37·3	37·3	37·3
June....................	—	36·2	36·9	35·5	36·3	35·5	36·4	34·1
September	—	34·4	35·2	34·7	34·7	33·7	34·0	34·1
December	—	34·4	35·6	34·5	35·5	33·7	33·6	34·1

(III.) DEATHS:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	27·5	24·5	23·4	23·0	23·5	24·7	26·0	24·4
June....................	—	21·4	21·0	20·4	21·0	21·3	21·6	21·5
September	—	22·1	20·8	19·5	20·5	21·1	22·0	20·5
December	—	22·2	23·8	21·5	20·2	23·4	22·3	22·9

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE *in each of the Nine* QUARTERS *ended March,* 1875.

1	2	3	4		5	6	7	8	9	10	
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.		Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcase), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.	
					Beef.	Mutton.		In-door.	Out-door.		
	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
1873 Mar. 31	92⅞	3·9	55	10	5½—8 6¾	6¼—9 7⅝	179—235 207	150,381	703,377	33	1
June 30	93⅞	5·2	56	5	6—8¾ 7⅜	6¾—9½ 8⅛	183—242 212	135,638	666,261	29	3
Sept. 30	92⅛	3·8	61	4	5¾—8¾ 7¼	6½—9¼ 7⅞	95—120 107	127,672	632,417	30	1
Dec. 31	92⅛	6·3	61	1	5—8½ 6¾	5¾—8½ 7⅛	96—117 107	137,409	625,316	30	8
1874 Mar. 31	92	3·6	62	2	5¼—8¼ 6¾	5½—8¼ 6⅞	112—127 119	146,082	641,910	23	5
June 30	93	3·4	61	1	5—8 6½	5—8¼ 6⅝	135—165 150	133,844	614,641	23	7
Sept. 30	92⅝	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·7	44	4	4⅞—8¼ 6½	4¾—8 6¼	73—96 84	138,868	587,772	24	7
1875 Mar. 31	92⅝	3·7	42	6	5—8 6½	4¾—8 6½	81—111 96	146,800	621,812	22	5

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-70.	Year 1874.	1874. Quarters ending				1875.
			March.	June.	Sept.	Dec.	March.
England and Wales	22·4	22·3	23·4	21·0	20·8	23·8	27·5
I. London	24·3	22·5	23·7	19·9	20·6	26·2	27·2
II. South-Eastern counties	19·1	17·5	19·5	17·1	15·9	17·5	23·3
III. South Midland ,,	20·2	18·5	20·1	17·5	17·0	19·5	26·2
IV. Eastern counties	20·1	18·8	20·4	18·8	16·7	19·2	24·6
V. South-Western counties	19·9	18·9	21·4	18·8	16·6	18·8	26·0
VI. West Midland ,,	21·8	21·7	23·3	20·4	20·2	22·9	28·3
VII. North Midland ,,	20·8	21·3	21·6	19·6	20·6	23·3	27·3
VIII. North-Western ,,	26·3	27·3	27·4	25·7	26·5	29·6	31·4
IX. Yorkshire	24·0	24·3	23·4	22·5	23·8	27·6	28·1
X. Northern counties	22·7	25·6	26·3	24·2	25·2	26·7	27·3
XI. Monmouthshire and Wales	21·6	23·1	26·0	23·7	20·0	22·8	28·6

D.—*Special Average Death-Rate Table:*—Annual Rate *of* Mortality *per* 1,000 *in* Town *and* Country Districts *of* England *in each Quarter of the Years* 1875-73.

	Area in Statute Acres.	Population Enumerated.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
		1871.		1875.	Mean '65-74.	1874.	1873.
In 131 Districts, and 59 Sub-districts, comprising the *Chief Towns*	3,183,965	12,892,982	March ..	28·9	26·6	25·2	24·4
			June	—	22·9	22·5	21·6
			Sept.	—	23·9	23·5	22·1
			Dec.	—	24·8	26·7	24·3
			Year	—	24·6	24·5	23·1
			Year	—	19·3	19·3	18·4
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,185,256	9,819,284	March ..	25·7	22·0	20·9	21·1
			June	—	19·4	19·1	18·7
			Sept.	—	17·3	17·2	15·9
			Dec.	—	18·6	19·9	17·9

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—Population; Births, Deaths; Mean Temperature *and* Rainfall *in the First Quarter of* 1875, *in* Twenty-One *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1875.	Births in 13 Weeks ending 3rd April, 1875.	Deaths in 13 Weeks ending 3rd April, 1875.	Annual Rate to 1,000 Living during the 13 Weeks ending 3rd April, 1875.		Mean Temperature in 13 Weeks ending 3rd April, 1875.	Rainfall in Inches in 13 Weeks ending 3rd April, 1875.
				Births.	Deaths.		
Total of 21 towns in U. K.	7,742,889	75,021	57,091	38·9	29·6	40·1	5·14
London	3,445,160	32,620	23,367	38·0	27·2	40·4	4·26
Portsmouth........................	122,632	1,054	687	34·5	22·5	—	—
Norwich	82,842	728	614	35·3	29·7	38·4	3·96
Bristol...............................	196,186	1,853	1,453	37·9	29·7	40·9	8·05
Wolverhampton................	71,718	768	580	43·0	32·4	39·5	4·58
Birmingham	366,325	3,792	2,945	41·5	32·3	40·4	5·61
Leicester...........................	109,830	1,148	807	42·0	29·5	40·0	4·03
Nottingham	92,251	866	760	37·7	33·1	38·4	3·91
Liverpool...........................	516,063	5,156	4,271	40·1	33·2	40·3	4·24
Manchester........................	356,626	3,677	3,170	41·4	35·7	40·1	4·85
Salford...............................	135,720	1,609	1,134	47·6	33·5	39·8	5·19
Oldham	87,437	923	716	42·4	32·9	—	—
Bradford	168,305	1,676	1,204	40·0	28·7	39·9	5·24
Leeds	285,118	2,781	1,959	39·2	27·6	40·1	5·23
Sheffield	267,881	2,859	1,819	42·8	27·3	40·1	4·78
Hull....................................	133,932	1,355	932	40·6	27·9	38·6	4·11
Sunderland	106,342	1,186	707	44·8	26·7	41·2	3·49
Newcastle-on-Tyne	137,665	1,447	941	42·2	27·4	—	—
Edinburgh	211,626	1,703	1,475	32·3	28·0	—	—
Glasgow	534,564	5,416	4,850	40·7	36·4	40·6	9·10
Dublin...............................	314,666	2,404	2,700	30·7	34·4	43·1	6·73

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended* 31*st December*, 1875-73; *and* BIRTHS *and* DEATHS *in Quarters ended* 31*st March*, 1875-73.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (*Persons.*)	MARRIAGES in Quarters ended 31st December.		
			1875.	1874.	1873.
		No.	No.	No.	No.
ENGLD. & WALES....*Totals*	37,319,221	22,712,266	58,437	61,261	60,277
I. London	75,362	3,254,260	9,157	9,195	9,184
II. South-Eastern	3,994,431	2,167,726	5,005	5,164	4,868
III. South Midland	3,201,325	1,442,654	3,163	3,365	3,616
IV. Eastern	3,211,441	1,218,728	3,118	3,363	3,227
V. South-Western	4,981,170	1,880,777	3,594	3,802	3,762
VI. West Midland	3,945,460	2,720,669	6,965	7,593	7,392
VII. North Midland	3,535,445	1,406,935	3,788	4,023	3,897
VIII. North-Western	1,998,914	3,389,044	8,959	9,227	9,324
IX. Yorkshire	3,702,384	2,395,569	6,959	7,274	7,042
X. Northern	3,547,947	1,414,234	3,936	4,154	4,115
XI. Monmthsh. & Wales	5,125,342	1,421,670	3,793	4,101	3,852

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 31st March.			DEATHS in Quarters ended 31st March.		
	1875.	1874.	1873.	1875.	1874.	1873.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....*Totals*	215,251	214,437	216,367	162,514	136,528	132,626
I. London	32,620	31,168	32,094	23,367	20,079	18,970
II. South-Eastern	17,916	18,078	18,376	13,318	11,008	10,436
III. South Midland	11,865	12,433	13,129	9,743	7,391	7,579
IV. Eastern	10,128	10,117	10,435	7,598	6,254	6,360
V. South-Western	14,362	14,449	15,111	12,210	10,018	9,880
VI. West Midland	26,256	26,702	26,838	19,850	16,117	16,215
VII. North Midland	13,151	13,369	12,755	9,822	7,729	8,107
VIII. North-Western	35,505	34,861	35,227	27,894	24,028	23,247
IX. Yorkshire	23,822	24,185	23,822	17,879	14,656	14,624
X. Northern	15,767	15,870	15,747	10,412	9,804	8,684
XI. Monmthsh. & Wales	13,859	13,205	12,833	10,421	9,384	8,524

* These are revised figures, and will be found to differ somewhat from those hitherto published.

G.—*General Meteorological Table, Quarter ended March,* 1875.

[Abstracted from the particulars supplied to the Registrar-General by James Glaisher, Esq., F.R.S., &c.]

1875 Months.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames				
	Mean.	Diff. from Average of 104 Years.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.		Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
Jan. ...	43·4	+7·0	+5·0	41·0	+4·0	38·2	+3·2	9·0	−0·6	39·4	·230	+·029	2·7	+0·3
Feb. ...	35·0	−3·6	−4·3	33·2	−4·4	30·3	−4·7	9·8	−1·5	38·9	·168	−·038	2·0	−0·4
Mar. ...	40·2	−0·9	−1·5	37·4	−2·0	33·8	−2·7	12·5	−2·2	41·3	·194	−·023	2·3	−0·2
Mean ...	39·5	−0·8	−0·3	38·6	+0·6	34·1	−1·4	10·4	−1·4	39·9	·221	+·013	2·5	−0·1

1875. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
										Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Amnt.	Diff. from Average of 60 Years.		At or below 30°.	Between 30° and 40°.	Above 40°.		
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
Jan. ...	81	− 7	29·762	+·023	548	− 5	3·0	+1·1	339	5	18	8	15·5	42·7
Feb. ...	82	+ 3	29·857	+·060	559	+ 6	0·8	−0·7	246	21	6	1	13·5	41·0
Mar. ...	78	− 4	29·954	+·204	555	+ 5	0·6	−1·0	309	20	7	4	17·1	46·3
Mean ...	80	− 2	29·858	+·096	554	+ 2	Sum 4·4	Sum +0·6	Mean 298	Sum 46	Sum 31	Sum 13	Lowest 13·5	Highst 46·3

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for January was 43°·4, being respectively 7°·0 and 5°·0 higher than the averages of the preceding 104 years and 34 years; it was 1°·7 and 1°·3 higher than the values in 1874 and 1873 respectively.

The mean temperature of February was 35°·0, being 3°·6 and 4°·3 lower than the averages of the preceding 104 years and 34 years; it was 3°·7 lower than in 1874, and 0°·7 higher than in 1873.

The mean temperature of March was 40°·2, being 0°·9 lower than the average of the preceding 104 years, and 1°·5 lower than the average of the preceding 34 years; it was 3°·5 and 1°·7 lower than the values in 1874 and 1873 respectively.

The mean high day temperatures of the air were 5°·1 and 2°·9 lower than their respective averages in February and March, and 4°·4 higher in January.

The mean low night temperatures of the air were 5°·9 and 0°·8 higher than their respective averages in January and March, and 2°·3 lower in February.

The mean daily ranges of temperature were all small, and were 1°·4, 2°·7, and 3°·6 lower than their respective averages in January, February, and March.

Therefore the days and nights of February and March were cold, and in January were warm.

H.—*Special Meteorological Table, Quarter ended* 31*st March,* 1875.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·790	58·5	27·0	31·5	25·0	7·6	43·0	90
Osborne	29·804	58·9	24·8	34·1	28·3	11·5	40·5	93
Barnstaple	29·773	57·0	27·5	29·5	26·8	9·2	43·7	87
Blackheath	29·815	57·0	19·8	37·2	28·9	9·3	40·0	88
Royston	29·865	57·8	8·7	49·1	38·8	12·6	38·9	84
Norwich	29·812	57·2	10·5	46·7	33·4	9·8	38·1	97
Llandudno	—	61·8	25·7	36·1	29·3	9·3	42·7	85
Liverpool	29·786	55·4	18·0	37·4	30·2	8·1	40·1	84
Stonyhurst	29·782	57·2	24·0	33·2	29·5	9·7	39·6	87
Leeds	29·825	57·0	12·0	45·0	33·0	10·4	39·9	82
North Shields	29·826	54·3	11·2	43·1	30·2	8·7	39·9	83

10	11	12	13	14	15	16	17	18
	WIND.						RAIN.	
NAMES OF STATIONS.	Mean estimated Strength.	Relative Proportion of				Mean Amount of Cloud.	Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·5	8	8	8	7	6·4	47	9·58
Osborne	0·2	7	9	7	7	7·2	38	7·73
Barnstaple	1·2	5	8	10	7	6·3	42	8·81
Blackheath	0·8	6	8	8	9	7·6	47	4·76
Royston	—	9	6	8	7	7·5	37	3·31
Norwich	—	5	10	7	7	—	39	3·96
Llandudno	0·9	4	8	9	9	7·3	46	6·06
Liverpool	1·3	3	10	8	8	7·3	48	5·21
Stonyhurst	—	6	10	7	7	8·4	61	7·79
Leeds	1·0	6	7	8	9	8·6	56	5·28
North Shields	1·5	8	5	7	10	7·4	51	4·05

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 31ST MARCH, 1875.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1875-71 *inclusive.*

	1875.		1874.		1873.		1872.		1871.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47	28,902	3·43
Deaths	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50	19,756	2·34
Marriages ..	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68	5,415	0·64
Mean Temperature	38°·7		40°·9		38°·1		40°·7		39°·1	
2nd Quarter—										
Births	—	—	32,295	3·73	31,283	3·64	30,726	3·61	30,583	3·63
Deaths	—	—	19,640	2·27	19,931	2·32	19,045	2·24	18,715	2·22
Marriages ..	—	—	6,730	0·78	6,690	0·78	6,398	0·75	5,946	0·70
Mean Temperature	—		49°·53		49°·2		49°·2		48°·7	
3rd Quarter—										
Births	—	—	30,702	3·55	28,975	3·38	29,181	3·43	28,689	3·40
Deaths	—	—	18,099	2·09	17,072	1·99	16,692	1·96	16,835	2·00
Marriages ..	—	—	5,582	0·64	5,816	0·68	5,891	0·69	5,424	0·64
Mean Temperature	—		56°·03		55°·4		55°·8		56°·3	
4th Quarter—										
Births	—	—	30,961	3·58	29,270	3·41	29,460	3·46	27,953	3·32
Deaths	—	—	22,162	2·54	18,411	2·15	18,759	2·20	19,338	2·29
Marriages ..	—	—	7,158	0·83	7,606	0·88	7,471	0·88	7,181	0·85
Mean Temperature	—		39°·5		42°·7		41°·8		41°·3	
Year— Population.	3,495,214		3,462,916		3,430,923		3,399,226		3,367,922	
Births	—	—	123,795	3·57	119,738	3·49	118,873	3·49	116,127	3·45
Deaths	—	—	80,676	2·33	76,857	2·24	75,741	2·22	74,644	2·22
Marriages ..	—	—	26,247	0·76	26,730	0·76	25,580	0·75	23,966	0·71

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending* 31*st March,* 1875, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	31,096	3·56	28	2,724	8·8	11·4
Principal towns	1,079,211	1,171,228	10,906	3·72	27	923	8·5	11·8
Large „	318,740	343,640	3,727	4·34	23	242	6·5	15·4
Small „	767,487	796,597	7,285	3·66	27	599	8·2	12·2
Mainland rural	1,062,576	1,053,718	8,325	3·16	32	912	11·0	9·1
Insular „	132,004	130,031	853	2·62	38	48	5·6	17·9

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	25,116	2·87	35	6,369	0·73	137
Principal towns	1,079,211	1,171,228	9,322	3·18	31	2,644	0·90	111
Large „	318,740	343,640	3,062	3·56	28	736	0·86	116
Small „	767,487	796,597	5,619	2·82	35	1,353	0·68	147
Mainland rural	1,062,576	1,053,718	6,328	2·40	42	1,408	0·53	189
Insular „	132,004	130,031	785	2·41	41	228	0·70	143

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending* 31*st March,* 1875.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	8·8						
Northern	7·1	Shetland	2·6	Forfar	10·3	Lanark	7·1
North-Western	5·2	Orkney	5·2	Perth	10·1	Linlithgow .	6·2
North-Eastern	16·0	Caithness	11·8	Fife	8·6	Edinburgh .	7·3
East Midland ..	9·6	Sutherland....	5·5	Kinross	11·8	Haddington	6·9
West Midland.	7·1	Ross and Cromarty	3·4	Clackmannan	7·7	Berwick	13·8
South-Western	7·1	Inverness	6·8	Stirling	7·0	Peebles........	10·6
South-Eastern.	7·7	Nairn	9·1	Dumbarton ..	6·1	Selkirk	7·9
Southern	14·4	Elgin	18·0	Argyll	8·9	Roxburgh ..	12·8
		Banff	20·8	Bute	6·0	Dumfries	12·2
		Aberdeen	19·8	Renfrew	7·0	Kirkcudbright ..	16·2
		Kincardine....	16·3	Ayr................	7·2	Wigtown	18·9

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 31*st March*, 1875.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	—	—	—
I. Northern	2,261,622	127,191	215	707	647
II. North-Western........	4,739,876	166,351	234	1,028	1,142
III. North-Eastern	2,429,594	393,199	491	3,167	2,184
IV. East Midland	2,790,492	559,676	1,071	4,748	3,914
V. West Midland	2,693,176	251,088	373	2,237	1,813
VI. South-Western........	1,462,397	1,183,218	2,726	13,564	10,861
VII. South-Eastern	1,192,524	475,523	956	4,150	3,263
VIII. Southern	2,069,696	203,772	303	1,495	1,292

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 31*st December*, 1874; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 31*st March*, 1875.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,319,	22,712,	58,437	2·6	215,251	9·4	162,514	7·1
Scotland	19,639,	3,360,	6,369	1·8	31,096	9·2	25,116	7·4
Ireland	20,323,	5,412,	5,218	1·0	36,444	6·7	30,589	5·6
GREAT BRITAIN AND IRELAND	77,281,	31,484,	70,024	2·2	276,791	8·7	218,219	6·9

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. *S. J.*

Trade of United Kingdom, 1875-74-73.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Three Months.					
	1875.		1874.		1873.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	3,361,	1,518,	5,246,	1,981,	5,408,	1,589,
Central Europe; viz., Germany, Holland, and Belgium	11,353,	9,868,	12,020,	11,006,	11,308,	12,928,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	16,137,	5,408,	15,007,	6,548,	15,200,	6,400,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	2,050,	2,129,	1,389,	2,538,	1,705,	2,846,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	5,272,	2,270,	5,385,	2,918,	6,711,	3,916,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	337,	93,	562,	142,	284,	108,
Western Africa	369,	201,	347,	192,	435,	262,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	181,	115,	94,	112,	80,	83,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	1,118,	692,	954,	429,	506,	285,
South Sea Islands	55,	1,	14,	6,	10,	14,
China, including **Hong Kong**	3,148,	2,710,	2,650,	3,033,	3,275,	2,653,
United States of America	21,408,	7,222,	23,447,	9,900,	20,530,	12,543,
Mexico and Central America	363,	350,	347,	234,	265,	306,
Foreign West Indies and Hayti	446,	672,	1,075,	592,	432,	1,046,
South America (Northern), New Granada, Venezuela, and Ecuador	310,	318,	315,	850,	387,	899,
„ **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	2,265,	1,081,	2,703,	1,081,	2,262,	1,533,
„ **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	2,638,	2,746,	2,443,	3,109,	2,269,	3,173,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	—	8,	6,	6,	—	—
Total—Foreign Countries	70,811,	37,402,	74,004,	44,677,	71,067,	50,584,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	9,041,	6,893,	8,265,	6,428,	7,149,	5,497,
Austral. Cols.—N. So. W., Vict., and Queensld.	4,174,	2,885,	4,962,	2,362,	2,728,	2,506,
„ „ So. Aus., W. Aus., Tasm., and N. Zealand	1,670,	1,104,	1,991,	1,319,	1,564,	920,
British North America	447,	2,441,	371,	567,	279,	494,
„ W. Indies with Btsh. Guiana & Honduras	1,205,	757,	1,075,	825,	773,	782,
Cape and Natal	1,142,	1,100,	1,010,	1,110,	851,	1,121,
Brt. W. Co. of Af., Ascension and St. Helena	147,	211,	123,	201,	71,	162,
Mauritius	289,	102,	397,	147,	460,	145,
Channel Islands	116,	169,	101,	166,	115,	164,
Total—British Possessions	18,231,	15,662,	18,295,	13,125,	13,990,	11,791,
General Total £	89,042,	53,064,	92,299,	57,802,	85,055,	62,376,

* *i.e.*, British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—**First Three Months** (*January—March*), **1875-74-73-72-71.**—*Declared Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Three Months.) Foreign Articles Imported.	[000's omitted.]	1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
Raw Matls.—*Textile*, &c.	Cotton Wool	17,164,	16,708,	17,534,	18,539,	18,738,
	Wool (Sheep's)	6,783,	7,123,	5,283,	5,572,	4,311,
	Silk*	3,535,	3,896,	3,386,	3,641,	3,896,
	Flax	711,	883,	907,	875,	1,277,
	Hemp	1,367,	1,370,	1,267,	1,588,	351,
	Indigo	1,156,	978,	1,108,	1,586,	1,227,
		30,716,	30,958,	29,485,	31,801,	29,806,
" " *Various.*	Hides	1,625,	1,293,	998,	1,019,	237,
	Oils	860,	764,	923,	1,029,	1,166,
	Metals	2,521,	2,111,	2,493,	2,979,	3,559,
	Tallow	445,	701,	538,	717,	822,
	Timber	920,	2,069,	1,534,	1,177,	667,
		6,371,	6,938,	6,486,	6,921,	6,451,
" " *Agrcltl.*	Guano	193,	723,	465,	224,	809,
	Seeds	2,114,	1,963,	4,693,	2,512,	2,382,
		2,307,	2,689,	2,158,	2,736,	3,191,
Tropical, &c., Produce.	Tea	3,269,	2,262,	2,655,	4,011,	3,777,
	Coffee	1,632,	1,747,	1,119,	979,	729,
	Sugar & Molasses	3,960,	6,850,	4,059,	4,217,	3,239,
	Tobacco	656,	644,	653,	498,	642,
	Rice	404,	701,	676,	461,	268,
	Fruits	818,	672,	566,	717,	541,
	Wines	1,634,	1,706,	1,137,	1,177,	1,541,
	Spirits	787,	638,	671,	680,	2,252,
		13,160,	15,220,	10,536,	12,740,	12,989,
Food	Grain and Meal.	9,372,	13,054,	12,199,	10,069,	2,903,
	Provisions	8,505,	8,330,	6,059,	4,937,	4,395,
		17,877,	21,384,	18,258,	15,006,	7,298,
Remainder of Enumerated Articles		10,041,	6,484,	10,244,	9,999,	9,819,
Total Enumerated Imports		80,472,	83,673,	77,167,	79,203,	68,554,
Add for Unenumerated Imports (say)		8,750,	8,700,	7,700,	7,900,	6,902,
Total Imports		89,222,	92,374,	84,867,	87,103,	75,456,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**First Three Months** (*January—March*), **1875-74-73-72-71.**—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(Three Months.) [000's omitted.] British Produce, &c., Exported.		1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	14,409,	15,104,	10,382,	15,382,	13,066,
	„ Yarn	3,109,	3,700,	2,696,	4,069,	3,165,
	Woollen Manufactures	6,219,	6,344,	8,196,	8,328,	5,757,
	„ Yarn	1,133,	1,259,	1,226,	1,870,	1,204,
	Silk Manufactures........	464,	541,	510,	637,	517,
	„ Yarn	177,	344,	412,	265,	320,
	Linen Manufactures	2,072,	2,040,	2,127,	2,219,	1,689,
	„ Yarn	379,	445,	520,	558,	504,
		27,962,	29,777,	26,099,	33,328,	26,222,
„ *Sewed.*	Apparel	644,	647,	766,	694,	622,
	Haberdy. and Mllnry.	1,349,	1,441,	1,637,	1,589,	1,340,
		1,993,	2,088,	2,403,	2,283,	1,962,
Metals, &c.	Hardware	992,	991,	1,167,	1,046,	715,
	Machinery....................	1,401,	1,411,	2,061,	1,571,	849,
	Iron	5,698,	7,021,	8,376,	6,251,	4,298,
	Copper and Brass........	746,	714,	941,	669,	568,
	Lead and Tin	288,	453,	262,	418,	291,
	Coals and Culm	1,792,	2,899,	2,741,	1,644,	1,106,
		10,917,	13,489,	15,548,	11,599,	7,827,
Ceramic Manufcts.	Earthenware and Glass	636,	667,	819,	640,	489,
Indigenous Mnfrs. and Products.	Beer and Ale................	655,	731,	674,	648,	522,
	Butter	54,	53,	52,	74,	62,
	Cheese	20,	17,	20,	20,	32,
	Candles	39,	46,	49,	60,	41,
	Salt..................................	138,	108,	152,	80,	105,
	Spirits	57,	39,	59,	51,	51,
	Soda	—	—	—	467,	305,
		964,	994,	1,006,	1,400,	1,118,
Various Manufcts.	Books, Printed	190,	182,	183,	165,	134,
	Furniture	—	—	—	—	—
	Leather Manufactures	789,	695,	171,	930,	1,126,
	Soap	80,	57,	59,	72,	46,
	Plate and Watches	59,	60,	47,	40,	36,
	Stationery	152,	162,	152,	126,	96,
		1,270,	1,156,	612,	1,333,	1,438,
Remainder of Enumerated Articles		5,438,	5,721,	12,089,	3,579,	4,120,
Unenumerated Articles..............................		3,880,	3,910,	3,800,	3,013,	3,255,
	Total Exports....................	53,060,	57,802,	62,376,	57,175,	46,431,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* **Three Months** *ended March*, 1875-74-73.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1875.		1874.		1873.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	26,889	15,394	76,219	42,056	24,135	19,703
Russia { Southern „	97,593	29,074	70,589	28,905	132,732	44,345
Sweden	43,534	45,514	166,449	107,260	107,107	73,529
Norway	52,368	46,023	176,181	50,115	213,995	42,323
Denmark........................	30,617	70,588	44,511	115,411	46,780	81,834
Germany........................	240,741	334,229	305,414	399,039	311,880	361,842
Holland	198,833	213,872	193,603	205,668	194,628	226,538
Belgium	206,748	234,594	212,870	204,457	222,650	243,343
France........................	476,154	635,359	396,466	597,981	459,531	612,386
Spain	183,693	136,134	222,300	163,524	206,568	157,562
Portugal	73,156	79,062	83,986	88,552	74,300	72,111
Italy........................	76,421	186,210	56,160	202,025	62,303	178,294
Austrian territories	14,572	16,794	6,513	21,123	4,918	31,399
Greece........................	39,364	15,187	26,051	13,338	13,739	16,338
Turkey (including Wallachia and Moldavia)	65,904	62,339,	55,210	83,882	68,857	75,393
Egypt	86,300	98,947	90,503	145,652	139,639	147,592
United States of America	823,134	488,042	956,450	545,797	733,075	524,248
Mexico, Foreign West Indies, and Central America	49,717	128,233	77,061	131,484	38,973	120,822
Brazil	63,241	97,675	57,424	130,114	48,570	81,892
Peru	53,101	38,853	92,564	16,899	56,595	49,100
Chili	11,943	72,510	17,270	54,713	19,487	59,961
China	35,415	8,842	26,342	2,608	30,995	7,552
Other countries	136,933	139,462	142,975	154,576	107,791	138,295
Total, Foreign Countries	3,086,371	3,192,917	3,553,111	3,505,179	3,319,248	3,366,402
BRITISH POSSESSIONS.						
North American Colonies	47,623	34,862	34,820	66,178	40,752	67,023
East Indies, including Ceylon, Singapore, and Mauritius	225,514	326,088	221,733	252,429	198,607	237,587
Australia and New Zealand	61,891	135,362	78,511	126,650	44,237	100,735
West Indies	24,060	45,382	17,987	36,945	19,954	46,091
Channel Islands................	46,929	34,345	54,328	33,568	51,059	37,317
Other possessions	55,776	172,903	58,587	224,528	54,679	202,181
Total, British Possessions	461,793	748,942	465,966	740,298	409,288	690,934
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Three months ended March, { 1875........	3,548,164	3,941,859	—	—	—	—
Three months ended March, { '74........	—	—	4,091,077	4,245,477	—	—
Three months ended March, { '73........	—	—	—	—	3,728,536	4,057,336

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* **Three Months** (*January—March*), **1875-74-73.**

[000's omitted.]

(First Three Months.)	1875.		1874.		1873.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	1,597,	13,	1,382,	6,	1,813,	4,
So. Amca. and W. Indies	269,	1,009,	613,	966,	234,	644,
United States and Cal.	1,738,	665,	53,	1,144,	1,435,	1,482,
	3,604,	1,687,	2,048,	2,116,	3,482,	2,130,
France	388,	229,	149,	253,	108,	535,
Germany, Holl. & Belg.	240,	511,	128,	1,148,	9,	6,
Prtgl., Spain, and Gbrltr.	17,	11,	9,	10,	20,	19,
Mlta., Trky., and Egypt	25,	8,	235,	2,	40,	2,
China	28,	7,	161,	149,	1,	85,
West Coast of Africa	31,	7,	14,	2,	15,	—
All other Countries	663,	108,	172,	500,	19,	70,
Totals Imported	4,996,	2,568,	2,916,	4,180,	3,694,	2,847,
Exported to:—						
France	3,242,	493,	810,	241,	363,	567,
Germany, Holl. & Belg.	1,040,	93,	698,	125,	2,034,	634,
Prtgl., Spain, and Gbrltr.	27,	273,	39,	96,	2,593,	119,
	4,309,	859,	1,547,	462,	4,990,	1,320,
Ind. and China (viâ Egypt)	172,	—	172,	2,996,	772,	590,
Danish West Indies	—	—	—	—	—	—
United States	234,	26,	1,	—	—	—
South Africa	—	—	4,	10,	136,	23,
Mauritius	—	—	—	—	—	—
Brazil	354,	—	185,	—	25,	—
All other Countries	386,	1,510,	1,301,	324,	534,	632,
Totals Exported	3,455,	2,395,	3,210,	3,792,	6,457,	2,565,
Excess of *Imports*	1,541,	174,	—	388,	—	282,
,, **Exports**	—	—	294,	—	2,763,	—

REVENUE.—(UNITED KINGDOM.)—31ST MARCH, 1875-74-73-72.

Net Produce in QUARTERS *and* YEARS *ended* 31*st* MARCH, 1875-74-73-72.

[000's omitted.]

QUARTERS, ended 31st March.	1875.	1874.	1875.		Corresponding Quarters.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	4,794,	4,898,	104,	—	5,299,	5,017,
Excise	8,551,	8,524,	—	27,	7,914,	7,453,
Stamps	2,775,	2,693,	—	82,	2,615,	2,540,
Taxes	1,850,	1,848,	—	2,	1,881,	1,903,
Post Office	1,420,	1,500,	80,	—	1,240,	1,280,
Telegraph Service	220,	359,	139,	—	280,	170,
	19,610,	19,822,	323,	111,	19,229,	18,363,
Property Tax	2,634,	3,794,	1,160,	—	4,934,	7,070,
	22,244,	23,616,	1,483,	111,	24,163,	25,433,
Crown Lands	99,	95,	—	4,	110,	110,
Miscellaneous	620,	836,	214,	—	651,	461,
Totals	22,963,	24,547,	1,697,	115,	24,924,	26,004,
			NET DECR. £4,582.			

YEARS, ended 31st March.	1875.	1874.	1875.		Corresponding Years.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	19,289,	20,339,	1,050,	—	21,033,	20,326,
Excise	27,395,	27,172,	—	223,	25,785,	23,326,
Stamps	10,540,	10,550,	10,	—	9,947,	9,772,
Taxes	2,440,	2,324,	—	116,	2,337,	2,330,
Post Office	5,670,	5,792,	122,	—	4,820,	4,680,
Telegraph Service	1,120,	1,210,	90,	—	1,015,	755,
	66,454,	67,387,	1,272,	339,	64,937,	61,189,
Property Tax	4,306,	5,691,	1,385,	—	7,500,	9,084,
	70,760,	73,078,	2,557,	339,	72,437,	70,273,
Crown Lands	385,	375,	—	10,	375,	375,
Miscellaneous	3,777,	3,883,	106,	—	3,797,	4,060,
Totals	74,922,	77,336,	2,663,	349,	76,609,	74,708,
			NET DECR. £2,414.			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST MARCH, 1875:—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 31*st March,* 1875; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 31*st of March,* 1875, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		22,963,147
Amount raised by the issue of Exchequer Bonds		1,000,000
Amount received in Repayment of Advances for Public Works, &c.		117,496
,, for Greenwich Hospital		58,521
Amount cancelled on account of the Charge on the 31st of December, 1874		61
Total		£24,139,225
Excess of the sums charged on the Consolidated Fund on the 31st March, 1875, payable in June quarter, 1875, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£1,910,335	
Surplus over Charge in Ireland	1,085,642	
Net deficiency		*824,693
		24,963,918

Paid:—

		£
Net Deficiency of the Balance in the Exchequer to meet the charge on the 30th of December, 1874, as per last account		5,237,262
Amount applied out of the Income to *Supply Services*		11,551,050
,, advanced for Greenwich Hospital		60,660
Charge of the *Consolidated Fund* on the 31st of March, 1875, viz.:—		
Interest of the Permanent Debt	£4,864,703	
Terminable Annuities	1,643,490	
Principal of Exchequer Bills	125,600	
Interest of Exchequer Bills	24,334	
Interest of Deficiency Advances	3,674	
The Civil List	101,578	
Other Charges on Consolidated Fund	271,415	
Advances for Public Works, &c.	748,285	
Sinking Fund	331,867	
		8,114,946
Total		£24,963,918

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* Charge on 31st March, 1875 (as above)	£8,114,946
Paid out of Growing Produce in March quarter, 1875	1,024,931
Portion of the Charge payable in June quarter, 1875	7,090,015
To meet which there was in the Exchequer on the 31st of March, 1875	6,265.322
Net Deficiency as above	824,693

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES), *First Quarter of* 1875.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1875.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
January 2	44	2	44	6	29	7
" 9	45	1	44	8	30	1
" 16	44	6	45	6	29	1
" 23	43	9	45	3	29	8
" 30	43	–	45	–	28	9
Average for January	44	1	45	–	29	5
February 6	42	7	45	–	29	11
" 13	41	11	44	5	29	6
" 20	41	6	43	3	29	9
" 27	40	11	42	11	29	7
Average for February	41	9	43	11	29	8
March 6	41	1	42	–	29	8
" 13	41	4	42	5	29	8
" 20	41	9	42	2	30	2
" 27	41	10	41	8	30	3
Average for March	41	6	42	1	29	11
Average for the quarter	42	6	43	9	29	8

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* First Quarter (*January—March*) *of* 1875.

[0,000's omitted.]

1	2	3	4	5	6	7	
Issue Department.					Collateral Columns.		
Liabilities.		Assets.					
Notes Issued.	Dates. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.	
£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1875.	Per cnt.
36,40	Jan. 6	11,02	3,98	21,40	26,62	7 Jan.	5
36,56	„ 13	11,02	3,98	21,56	26,29	14 „	4
36,81	„ 20	11,02	3,98	21,81	26,21		
36,93	„ 27	11,02	3,98	21,93	25,83	27 „	3
35,46	Feb. 3	11,02	3,98	20,46	25,37		
34,92	„ 10	11,02	3,98	19,92	25,92		
35,02	„ 17	11,02	3,98	20,02	25,66	18 Feb.	3½
35,20	„ 24	11,02	3,98	20,20	25,38		
35,05	Mar. 3	11,02	3,98	20,05	25,06		
35,94	„ 10	11,02	3,98	19,94	25,35		
35,20	„ 17	11,02	3,98	20,20	25,54		
35,38	„ 24	11,02	3,98	20,38	25,93		
35,37	„ 31	11,02	3,98	26,37	26,64		

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates. (Wdnsdys.)	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,02	5,49	20,37	,29	Jan. 6	15,95	17,59	9,78	,69	44,00
14,55	3,32	4,31	19,55	,33	„ 13	15,95	15,22	10,27	,67	42,11
14,55	3,35	3,92	19,68	,33	„ 20	15,95	15,36	10,60	,72	41,83
14,55	3,35	3,76	19,79	,31	„ 27	14,22	15,62	11,10	,83	41,77
14,55	3,38	4,22	18,26	,36	Feb. 3	13,57	17,35	9,09	,76	40,77
14,55	3,39	5,33	17,36	,35	„ 10	13,57	17,58	9,00	,83	40,98
14,55	3,42	6,20	18,07	,36	„ 17	13,60	18,80	9,36	,84	42,60
14,55	3,38	6,68	17,60	,30	„ 24	13,60	18,19	9,82	,87	42,48
14,55	3,67	6,88	17,48	,38	Mar. 3	13,60	19,58	9,99	,78	42,97
14,55	3,68	8,13	18,58	,36	„ 10	13,61	21,14	9,59	,97	45,30
14,55	3,71	8,09	17,90	,32	„ 17	13,61	20,37	9,66	,93	44,57
14,55	3,71	8,88	17,62	,31	„ 24	13,60	21,15	9,45	,87	45,08
14,55	3,71	8,72	18,81	,28	„ 31	13,60	22,95	8,73	,79	46,07

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND *and* WALES *on Saturday in each Week during the* FIRST QUARTER (*January—March*) *of* 1875; *and in* SCOTLAND *and* IRELAND, *at the Three Dates, as under.*

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,89).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,63).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,76).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1875.	£	£	£	£	1875.	£	£	£	£	£	£
Jan. 2	124,01	2,58	2,27	4,80							
„ 9	111,89	2,64	2,34	4,98							
„ 16	149,20	2,65	2,36	5,01							
„ 23	964,86	2,62	2,34	4,96	Jan. 23	1,99	3,87	5,86	3,63	3,25	6,88
„ 30	149,62	2,54	2,31	4,85							
Feb. 6	101,46	2,51	2,31	4,82							
„ 13	144,90	2,45	2,30	4,75							
„ 20	970,80	2,42	2,28	4,70	Feb. 20	1,96	3,74	5,70	3,67	3,13	6,80
„ 27	148,79	2,41	2,26	4,67							
Mar. 6	107,70	2,42	2,28	4,70							
„ 13	135,34	2,41	2,28	4,69							
„ 20	101,08	2,41	2,28	4,69	Mar. 20	1,83	3,70	5,53	3,58	3,05	6,63
„ 27	107,73	—	—	—							

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* LONDON *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* LONDON.

1	2	3	4	5	6	7	8	9
				Calcutta.				
DATES.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	India Council.* 60 d. s.	At Calcutta on London. 6 m. d.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard Silver in bars in London. pr. oz.
1875.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
Jan. 2	25·52½	20·82	4·86	22	—	—	—	57½
„ 16	25·50	20·73	4·86½	22⅛	22 11/16	50⅜	¾	57¼
Feb. 6	25·47½	20·72	4·86½	22 1/16	22½	—	—	57¼
„ 20	25·45	20·73	4·83½	21⅞	22⅜	50⅜	—	57¼
Mar. 6	25·47½	20·76	4·80	21¾	22⅜	50⅜	—	57 1/16
„ 20	25·52½	20·84	4·78	21⅞	22 5/16	50⅜	¼	57¼

* Bankers' drafts.

ADDITIONS TO THE LIBRARY DURING THE QUARTER ENDED 30TH JUNE, 1875.

Donations.	By whom Presented.
Mittheilungen aus dem Gebiete der Statistik. Herausgegeben von der K. K. Statistichen Central Commission. Heft vi. 20th Year. 133 pp., paper, roy. 8vo. Vienna, 1874	Dr. Adolf Ficker
Statistisches Jahrbuch für das Jahr, 1872. Herausgegeben von der K. K. Statistischen Central Commission. Hefte iii, iv, viii. pp. 91, 75, 39; paper, royal 8vo. Vienna, 1874	"
Statistisches Jahrbuch für das Jahr, 1873. Herausgegeben von der K. K. Statistischen Central Commission. Hefte vi, ix. 39, 37 pp., paper, royal 8vo. Vienna, 1875	"
Statistische Monatschrift. Herausgegeben vom Bureau der K. K. Statistischen Central Commission. Hefte i, ii. 1 Year. 48, 96 pp., paper, royal 8vo. Vienna, 1875	"
Der Bergwerks—Betrieb Oesterreichs im Jahre, 1873. ii (berichtlicher) Theil. Herausgegeben vom K. K. Ackerbau—Ministerium. 263 pp., paper, royal 8vo. Vienna, 1874	"
Die Weinproduction in Oesterreich. Zusammengestellt von Arthur Freiherrn von Hohenbruck. Veröffentlicht vom K. K. Ackerbau—Ministerium. 200 pp., paper, map, 4to. Vienna, 1873	"
Zeitschrift des Königlich Preussischen Statistischen Bureaus. Redigirt von dessen Director Dr. Ernst Engel. Heft iv (October—December). 14th Year. 87 pp., paper, 4to. Berlin, 1874	Dr. Ernst Engel
Compte Général de l'Administration de la Justice Criminelle en France pendant l'année 1872. 267 pp., paper, 4to. Paris, 1874	Ministre de la Justice
Compte Général de l'Administration de la Justice Civile et Commerciale en France pendant l'année, 1872. 224 pp., paper, 4to. Paris, 1874	"
Hivatalos Statistikai Közlemények Riadja az arszágos Magyar Kir. Statistikai Hivatal. Evfolyam vii, Füzet v, vi. 151 and 317 pp., paper, 4to. Buda-Pest, 1875	Le Bureau Statistique Royal, Hongrois
Hivatalos Statistikai Közlemények Riadja az arszágos Magyar Kir Statistikai Hivatal. Evfolyam vii, Füzet i. 414 pp., paper, 4to. Buda-Pest, 1874	"
Verwalthungs—Bericht der Preussischen Bank für das Jahr, 1874. (Pamphlet) paper, 4to. Berlin, 1875	
Statistique de la France. Statistique Sommaire des Industries Principales en 1873. 113 pp., paper, maps, 8vo. Paris, 1874	Le Ministre d'Agriculture, Paris
Annali del Ministero di Agricoltura, Industria, e Commercio, 1874. 291 pp., paper, 8vo. Roma, 1874	Ministero di Agricoltura, Industria e Commercio
Die Königliche Haupt-und Residenzstadt Berlin in ihren Bevölkerungs — Berufs-und Wohnungsverhältnissen. Dr. Jur. H. Schwabe. 286 pp., board, royal 8vo. Berlin, 1874	Dr. Happé, Bureau de Statistique de la ville de Berlin
Bollettino delle Situazione Menseli dei Conti. 40 pp., paper, folio. Roma, 1875	Ministero di Agricoltura, Industria e Commercio

Donations—Contd.

Donations.	By whom Presented.
Zeitschrift des Koeniglichen Sächsischen Statistischen Bureaus xx Jahrgang. Heft 3, Nos. 7 to 9. 56 pp., paper, map, 4to. Dresden, 1874	Das Statistische Bureau des Königl. Sächs. Ministerium des Innern, Dresden
Zeitschrift des Koeniglichen Sächsischen Statistischen Bureaus. Supplement Juni xvii, Jahrgang 1875. 307 pp., paper, 4to. Dresden, 1875	„
The Journal of the Bombay Branch of the Royal Asiatic Society. Vol. x, No. 29, with Appendix. 171 pp., paper, plates, 8vo. Bombay, 1874	The Society
Reports of the Inspectors of Factories for the Half-year ending 30th April, 1869. 140 pp., paper, 8vo. London, 1869	A. Redgrave, Esq.
The Banks of the United Kingdom, their Resources and Reserves. A Statistical Research, by Thomas B. Moxon, Esq., of Stockport. (For private circulation.) 13 pp., paper, 8vo, 1875	The Author
Remarks and Suggestions on the Report of the Commissioners of Friendly Societies, and the Bill of the Chancellor of the Exchequer. By G. Poulett Scrope, Esq., F.R.S., F.G.S. 44 pp., paper, 8vo. London, 1874	Messrs. Ridgways
South Australian Directory, 1875. By J. Boothby, Esq. 558 pp., cloth, 8vo. Adelaide, 1875.	The Author
The Principal Speeches and Addresses of His Royal Highness the Prince Consort. Tenth Thousand. 268 pp., cloth, 8vo. London, 1862	J. Finch, Esq.
The Colonial Office List, 1875. 361 pp., cloth, 8vo. London, 1875	Messrs. Harrison and Sons
Institution of Civil Engineers, Minutes of Proceedings of. Vol. xxxix, Session 1874-75, Part I. 455 pp., cloth, plates, 8vo. London, 1875	The Institution
English Free Trade and Foreign Protection. A Free Trade Problem in connection with the Sugar Convention of 1864. By W. P. B. Shepheard, Esq., M.A. 32 pp., paper, 8vo. London, 1875	The Author
The Mauritius Almanac and Colonial Register for 1875. By John B. Kyshe, Esq., F.S.S. Seventh Publication. 275 pp., paper, 8vo. Mauritius, 1875	The Editor
Parliamentary Paper, No. 396. Loans on Dues, &c. (Vestries, &c.) 288 pp.	F. Purdy, Esq.
Reports of the Mining Surveyors and Registrars, Victoria. No. 84. Quarter ending 30th September, 1874. 42 pp., paper, plates, folio. Melbourne, 1874	The Mining Registrar
Parliamentary Papers—	
No. 19. East India (Loans raised in England)	India Office
„ 40. Ecclesiastical Benefices (Presentation)	
„ 63. East India (Appointments)	
„ 93. Army (Regimental Exchanges)	
„ 102. East India (Income and Expenditure)	
„ C, 982—1. East India (Products). Part II. Reports on the Silk Industry in India, and on the Supply of Timber in the Burmah Markets	

Donations—Contd.

Donations.	By whom Presented.
Parliamentary Papers—Contd.	
No. C, 1,110. Report on the Administration of the Forest Department in the several Provinces under the Government of India, 1872-73. In two parts, with Appendices „ C, 1,168. Slave Trade. No. 1 (1875)	India Office
Indian Railways. By Colonel J. P. Kennedy, F.S S. Pamphlet. Paper, maps, plates, diagrams, &c., folio. 1874	The Author
Mineral Statistics of the United Kingdom for the years 1871-72 and 1873. 3 vols. Paper. London, 1872-74.	Director-General of the Geological Survey
Royal Agricultural Society. Journal of. Vol. ii, second series. 360 pp., paper, plates plans, &c., 8vo. London, 1875	The Society
Royal Agricultural Society. General Index to vols i to x, second series. 134 pp., paper, 8vo. London, 1875	„
The Western—a Journal of Literature, Education, and Art. Nos. 1 to 4, vol. i. Paper, 8vo. St. Louis, Mo., 1875	The Editor
The Resources, Productions, and Social Condition of Spain. By Alexander Delmar. 43 pp., paper (2 copies), 8vo. Philadelphia, U.S.A., 1875	The Author
Reports of the Inspectors of Factories for the half year ending 31st October, 1874. 187 pp., paper, 8vo. London, 1875	A. Redgrave, Esq.
Parliamentary Papers. No. 85. East India (Kirwee Bounty). „ 104. Return of the Cost of the several Colonies. „ 116. East India (Compensation of Officers). Report from Select Committee on. „ 89. Return of all Loans raised in India chargeable on the Revenues. „ C,—1,115, 1,115—1. Treatment of Immigrants in Mauritius. „ D,—1203. East India. Administration of Baroda. „ 116. „ Compensation of Officers. „ 123. „ Famine—Return.	India Office
Sammendrag af Statiske Oplysninger augaaende Kongeriget Danmark. No. 6. 105 pp., board, 8to. Kopenhagen, 1875	Le Bureau de Statistique du Danemark
Oplysninger om Arbeidernes ae Ronimiske Vilkaar i Kongeriget Danmark in Aaret 1872. 75 pp., paper, 4to. Kopenhagen, 1874	„
Statistisk Tabelvaerk. Trediekaekke, athe og Tyvende Buid indeholdende Tabeller over Königeriget Danmarks vare—inaförsel og naförsel samt skibsfart og Braendevins—Produktion M. M. 159 pp., paper, 4to. Kopenhagen, 1875	„
Statistisk Sahelvaerk. Tredie Raekke, o yv og Tyvende Bind, indeholdende ouersigter ouer Störrelsen af det Besaaede areal og udsaeden i Kongeriget Danmark den 15 de Juli 1875. 139 pp., board, 4to. Kopenhagen, 1875	„

Donations—Contd.

Donations.	By whom Presented.
Sillaeg til Statistisk Sahelvaerk Tredie Raekke, attende Bind, indeholdende populations-kaart over Konigeriget for Aaret 1870. 8 pp., paper, 3 maps, 8to. Kopenhagen, 1874	Le Bureau de Statistique du Danemark
Det Krongelige Norske Frederiks Universitets. Aarsberetinug for Aaret 1873. 192 pp., paper, crown 8vo. Christiania, 1874	Royal University of Norway, Christiania
Oversigt over Kongeriget Norges Indtaegter og udgifter for Aaret 1872. 36 pp., paper, 4to. Christiania, 1874 Tabeller vedkommende Norges Bergvaerksdrift i Aarene 1866-1870. 14 pp., paper, 4to. Christiania, 1874	„
Oversigt over Suidssygeasylernes Virksomhed i Aaret 1873. 36 pp., paper, 4to. Christiania, 1874	„
Beretning om Skolevaesenets Tilstand i Kongeriget Norges Landdestrikt for Aaret 1872. 93 pp., paper, 4to. Christiania, 1874	„
Uddrag af Consulatberetninger vedkommende Norges Handel og Skibsfart i Aaret 1873. 103 pp., paper, 4to. Christiania, 1874	„
Tabeller vedkommende Folketae Unigerne i Aarene 1801 og 1825. 97 pp., paper, 4to. Christiania, 1874	„
Tabeller vedkommende Folkeinacugdens Bevaegelse i Aarene 1851—1870. 57 pp., paper, 4to. Christiania, 1874	„
Fattigstatistik for 1870. 64 pp., paper, 4to. Christiania, 1870	„
Fattigstatistik for 1871. 64 pp., paper, 4to. Christiania, 1871	„
Mittheilungen des Statistischen Bureaus der Stadt Leipzig. Herausgegeben von Professor Dr. H. Sonnenkalb. Medicinalrath. 22 pp., paper, folio. Leipzig, 1875	Statistisches Bureau Leipzig
Die Ersparnisskassen der Schweiz von J. L. Spyri. 142 pp., paper. Bern, 1875	Bureau Fédéral Statistique Berne
Geburten, Sterbefälle und Trauungen in der Schweiz in den Jahren 1867-71. 85 pp., paper. Bern, 1874	„
Emigration Suisse pour les pays d'outre-mer en 1873. 1 sheet	„
Exportation de la Suisse aux Etats-Unis d'Amérique en 1874. 1 sheet	„
No. 982—11. Report on the Cultivation of and Trade in Jute in Bengal, and on Indian Fibres for Paper „ 139. East India (Civil Service Memorials). „ 488. Condition of Indian Immigrants in Mauritius. „ 13. East India (Loans raised in England). „ 109. East India (Custom Duties).	India Office
Which Way; or an Exposition of the Practical Effect of Error in Faith, &c. Pamphlet, 55 pp., paper, crown 8vo. London, 1861	Capt. A. G. Reid
The Sanitarian for April, 1875. No. 25, vol. iii. 48 pp., paper, 8vo. New York, 1875	The Editor
The Original. By the late Thos. Walker, M.A. Edited and arranged, with additions, by Wm. A. Guy, M.B., F.R.S., &c. 5th Edition. 404 pp., cloth, 8vo. London, 1875	Dr. Guy

Donations—Contd.

Donations.	By whom Presented.
Report of the Official Delegates from the United States to the Eighth Session of the International Statistical Congress, 1872. 124 pp., cloth, 8vo. Washington, 1875	E. Young, Esq., Chief of the U.S. Bureau of Statistics
Another copy of the above	The Hon. William Barnes
Census of the Bombay Presidency, 1872. General Reports and Tables of. Parts 1 and 2. 744 pp., boards, map, folio. Bombay, 1875	Secretary of State for India
Census of the Madras Presidency: Report on—with Appendix (Vol. i.) 371 pp., boards, maps, folio. Madras, 1874	"
Supplementary Tables of the above (vol. ii). 357 pp., boards, folio. Madras, 1874	"
Belgium: Statistical and Commercial Report on—By Sir Henry Barron, Bart. Pamphlet, 18 pp., 8vo. 1875	The Author
Results of Censuses of the Population of Convict Prisons in England, taken in 1862 and 1873. Parts 1 and 2. 38 pp., 8vo. London, 1875	Col. E. F. Du Cane, C.B.
Census of Victoria, 1871. Part 9 (B). Occupations of the People—detailed Tables. 63 pp., folio. Melbourne, 1874	Henry H. Hayter, Esq., Government Statist, Victoria
Manchester Statistical Society, Transaction of—Session 1873-74. Annual vol. 86 pp., 8vo. Manchester, 1874	The Society
The Progress of the Mathematical Theory of Political Economy. By W. Stanley Jevons, Esq., M.A., F.R.S. Pamphlet, 19 pp., 8vo. Manchester, 1875	The Manchester Statistical Society
Notes on the Movements of the Bank of England Reserve in the last Ten Years. By Mr. R. Montgomery. Pamphlet, 23 pp., 8vo. Manchester, 1875	"
On some Defects in the Statistics of Books and Libraries. By Wm. E. A. Axon, Esq., M.R.S.L., F.S.S. Pamphlet, 12 pp., 8vo. Manchester, 1875	"
Notes on the relative Numbers of the Sexes amongst Emigrants, and on Kindred Topics. By T. A. Welton, Esq., F.S.S. Pamphlet, 13 pp., 8vo. Salford, 1875	"
Reports of the Inspectors of Factories, for the Half Year ending 30th April, 1867. 38 pp., 8vo. London, 1867	A. Redgrave, Esq.
The Asiatic Society of Japan; Transactions of—from 14th October to 23rd December, 1874. Vol. iii, part 1. 198 pp., 8vo. Yokohama, 1875	The Society
Criminal Returns, Metropolitan Police, 1874. Pamphlet, 47 pp., 8vo. London, 1875	Commissioners of Metropolitan Police
Journal of the Royal United Service Institution. Appendix. Vol. xviii. 42 pp., 8vo. London, 1875	The Institution
Twelve Copies of a Report of Proceedings of a Conference of Colonial Government Statists, held in Tasmania in January, 1875. 4 pp., folio. Adelaide, 1875	J. Boothby, Esq.
The Athenæum. Parts 567, 568, 4to. London, 1875	The Editor
Revue Bibliographique Universelle. Partie Litteraire, Nos. 3, 4, and 5 of vol. xiii. Partie Technique, Nos. 3, 4, and 5 of vol. xv	"
Journal of the Franklin Institute. Nos. 3 and 4, vol. lxix, third series, 8vo. Philadelphia, 1875	The Institute
The Bankers' Magazine. Nos. 373 to 375, 8vo. London, 1875	The Editor

Donations—Contd.

Donations.	By whom Presented.
Journal of the Institute of Actuaries. No. 98, vol. xviii. 8vo. London, 1875	The Institute
The Indian Economist. Nos. 6, 7, and 8 of vol. vi. Folio. Calcutta, 1874	The Editor
Transactions of the Institution of Surveyors. Parts 7 to 12 of vol. vii. 8vo. London, 1875	The Institution
Proceedings of the Royal Geographical Society. Nos. 2 to 5 of vol. xix. 8vo. 1875	The Society
Journal of the Bengal United Service Institution. No. 79, vol. xviii. 8vo. Calcutta, 1875	The Institution
Journal of the East India Association. Part 3, vol. viii. 8vo. London, 1875	The Association
Proceedings of the Royal Institution. No. 62 of vol. vii. Part 5, 8vo. London, 1875	The Institution
Proceedings, Royal Medical-Chirurgical Society. No. 7, vol. vii. 8vo. London, 1875	The Society
Italian Meteorological Returns for June, July, September, and October, 1874. 4to. Rome, 1874	Professor Luigi Bodio
Bollettino delle Situazioni Mensseli dei Conti, February, 1875. Folio. Rome, 1875	Il Ministro di Agricoltura, Indus., e Commercio
Proceedings of the Academy of Natural Science of Philadelphia. Parts 1, 2, and 3, 1874. 8vo. Philadelphia, U.S.A., 1875	The Academy
Sessional Proceedings of the National Association for the Promotion of Social Science. Nos. 1, 2, 5, 7, 8, 9, and 10 of vol. viii. 8vo. London, 1875	The Association
Returns (Quarterly) of Births, Deaths, and Marriages in Scotland. No. 81. 8vo. Edinburgh, 1875	Registrar-General of Scotland
New York Banker's Magazine and Statistical Register. Nos. 9, 10, and 11 of vol. ix, third series. 8vo. New York, 1874-75	The Editor

Purchased.

Journal des Economistes. Nos. 111, 112, and 113. March, April, and May, 1875.
Annales d'Hygiène Publique. No. 88. April, 1875.
Investor's Monthly Manual (current monthly numbers).
The Economist (current weekly numbers).
The Annual Register for the Year 1874. New series.
Hallam's Middle Ages. Tenth edition. With Supplemental Notes. In 3 vols. 1853.
Becker's Scientific London.

Vol. XXXVIII.] [Part III.

JOURNAL OF THE STATISTICAL SOCIETY,

SEPTEMBER, 1875.

REPORT *of the* COUNCIL *for the* FINANCIAL YEAR *ended* 31*st December*, 1874, *and for the* SESSIONAL YEAR *ended* 29*th June*, 1875, *presented at the* FORTY-FIRST ANNIVERSARY MEETING *of the* STATISTICAL SOCIETY, *held at the Society's Rooms, Somerset House Terrace (King's College Entrance), Strand, W.C., London, on the* 29*th of June*, 1875, *with the* PROCEEDINGS *of that Meeting.*

Report of the Council.

THE forty-first anniversary of the existence of the Society finds the Council in a position to announce to the Fellows a continuance of the prosperity notified at the general meetings in 1873 and 1874.

The number of new Members, as will be seen by the following table, continues to be greatly in excess of that of former years (1873 only excepted), and there is a progressive increase in the total number of Fellows, and especially of Life Members.

Particulars.	1874.	1873.	1872.
Number of Fellows on 31st December	588	530	454
Life Members included in above	84	75	72
Members lost during the year by death, withdrawal or default	35	34	17
New Members elected	93*	110	40

* Includes one resignation cancelled.

The financial state of the Society exhibits a satisfactory result, notwithstanding the extra expense incurred in the removal of the Society to its present quarters—a portion of which enters into the accounts of the last year,—and the heavy loss of Members by death and otherwise: the numbers so lost, being by deaths 12, withdrawals 7, defaulters 16.

Particulars.	1874.	1873.	1872.	1871.
	£	£	£	£
Balance at beginning of year	376	411	290	214
Receipts from all sources	1,377	1,248	1,112	880
Cash balance at end of year	262	376	411	290
Surplus of assets over liabilities	2,359	2,508	2,357	2,061

The smaller cash balance at the end of last year, as shown in the foregoing table, is due to the additional outlay attending the change of quarters before mentioned.

The Building Fund, which with interest accruing, amounted to 123*l.* 17*s.* 7*d.* on the 10th March last, remains intact.

The Session was opened, as usual, by the President's address, subsequent to which papers were read in the order of their succession, by the gentlemen mentioned, on the subjects noted in the subjoined abstract of the monthly proceedings of the Society.

Proceedings of the Statistical Society—

SESSION 1874-75.

First Ordinary Meeting, Tuesday, 17*th November*, 1874.

The President, DR. W. A. GUY, F.R.S., in the Chair.

The undermentioned were elected Fellows, viz.:—

The Rev. R. W. Stainton-Moses, M.A.
James Mudie Spence, F.R.G.S., F.Z.S.
The Hon. George Pepys.
The Rt. Hn. Alderman Stone, Lord Mayor
Captain Andrew Gildart Reed.
Henry Waite, Esq., F.R.G.S.
David Joseph Kennelly, Esq., F.R.G.S.
Sir James Ramsden, of Barrow, J.P., D.L.
William Henry Overall, Esq., F.S.A.
J. Thomas Arlidge, Esq., M.D., F.R.C.P.
Rd. Quain, Esq., M.D., F.R.S., F.R.C.P.
Chas. W. Cookworthy Hutton, Esq., J.P.
Sir Francis Lycett, J.P.
Hillary Nicholas Nissen, Esq., J.P.
Robert Elliot, Esq., M.D., F.R.C.P.
Capt. D. H. Doherty Waterhouse.
James Spicer, Esq., J.P.
The Rev. Enos Couch, M.A., F.R.G.S.
A. E. Mackay, R.N., M.D., F.R.C.S.
Edward William Brabrook, Esq., F.S.A.
Sir George Campbell, K.C.S.I.
Sir John Francis Davis, Bart., K.C.B.
John S. Phené, Esq., F.R.G.S., F.S.A.
Charles Hood, Esq., F.R.S., F.R.A.S.
John Bennet Lawes, Esq., F.R.S., F.C.S.
Thomas Woolner, Esq., R.A.
William Henry Davies, Esq.
James Morris, Esq., M.D., F.R.C.S.
James Nisbet Blyth, Esq.
Captain Septimus Robert Welch.
James Hertz, Esq.
Captain William Stephen M. Rayner.
Ernest Walter Norfolk, Esq.
Herbert Jones, Esq.
The Rev. Canon Ashwell, M.A.
Captain Eyre Massey Shaw.
Samuel Chadwick Hepworth, Esq.
James Alexander Dow, Esq.
Henry Wheler Maynard, Esq.
Alban George Henry Gibbs, Esq.
James Farmer, Esq.
Charles Kelly, Esq., M.D.
George Murray Lang, Esq., R.N.
George Edward Wythes, Esq.
J. Ferguson, Esq.
A. M. Ferguson, Esq.
Wm. Allan Carter, Esq., C.E., F.G.S.E.
Francis Sibson, Esq., M.D., F.R.S.
Sandford Moore, Esq., M.B.
Frank May, Esq.

The President read his "Inaugural Address."

Second Ordinary Meeting, Tuesday, 15th December, 1874.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned were elected Fellows, viz.:—

James Watson, Esq., F.R.G.S.
George Joseph Williamson, Esq., F.R.S.L., F.S.A.
John Biddulph Martin, Esq., F.Z.S.
Patrick George Craigie, Esq.
Charles Gatliff, Esq.

The following Paper was read:—

"On the Value of Death-rates as a Test of Sanitary Condition." By Mr. N. A. Humphreys, F.S.S.

Third Ordinary Meeting, Tuesday, 19th January, 1875.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned were elected Fellows, viz.:—

George Caleb Challen, Esq.
William Hardwicke, Esq., M.D.
Thomas R. Wilkinson, Esq.
The Right Hon. Lord Borthwick.
William Russell Crowe, Esq.
Arthur Gunn, Esq.

The following Paper was read:—

"The Consumption of Intoxicating Liquors at Various Periods as Affected by the Rates of Duty Imposed upon them." By the Rev. Dawson Burns, M.A., F.S.S.

Fourth Ordinary Meeting, Tuesday, 16th February, 1875.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned were elected Fellows, viz.:—

Lieut.-Col. H. M. Hozier.
Edward Henry Scott, Esq., J.P.
Thomas G. C. Browne, Esq.
Ernest Alers Hankey, Esq.
Edward D. J. Wilson, Esq.
Richard Rouse Mabson, Esq.
Alexander Gair, Esq.
John Shackleton Mathers, Esq.
David Drimmie, Esq.

The following Paper was read:—

"On Improved Dwellings: their Beneficial Effect on Health "and Morals, with Suggestions for their Extension." By Mr. Charles Gatliff, F.S.S.

Fifth Ordinary Meeting, Tuesday, 16th March, 1875.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned were elected Fellows, viz.:—

John Record, Esq.
Frederick Haynes Carter, Esq.
Alfred Marsh, Esq.
Samuel Baddeley, Esq.

The following Papers were read:—

(1.) "On Marriages in England between Cousins, and their "Effects." By Mr. G. H. Darwin, M.A.

(2.) "On the Mercantile Navies of the World in the Years "1870 and 1874, Compared." By Mr. H. Jeula, F.R.G.S, &c.

Sixth Ordinary Meeting, Tuesday, 20th April, 1875.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned was elected a Fellow, viz.:—

John Dun, Esq.

The following Paper was read:—

"On Friendly Societies and Similar Institutions." By Mr. E. W. Brabrook, F.S.A., &c.

"An addition to Mr. Darwin's Paper, read at the previous "Meeting, was submitted and taken as read, with the view of "adding it to his Paper."

Seventh Ordinary Meeting, Tuesday, 18th May, 1875.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned was elected a Fellow, viz.:—

W. Jones Loyd, Esq., J.P.

The following Paper was read:—

"On the Progress of our Foreign Trade—Imports and Exports— "during the past Twenty Years." By Mr. Stephen Bourne, F.S.S.

Eighth Ordinary Meeting, Tuesday, 15th June, 1875.

The President, Dr. W. A. Guy, F.R.S., in the Chair.

The undermentioned were elected Fellows, viz.:—

Harry Burrard Farnall, Esq., C.B., J.P.
Sir David Lionel Salomons, Bart., J.P.
Thomas Bevan, Esq., J.P.
Henry Bingham Mildmay, Esq., J.P.
Thomas Lane, Esq.
Captain Swinnerton Halliday Dyer, J.P.
William Wright Stanger, Esq., J.P.
James Braby, Esq., J.P.

The following Honorary Member was duly elected:—

Henry Heylyn Hayter, Esq., The Government Statist of Victoria.

The following Paper was read:—

"The Effect of Migrations upon Death-rates." By Mr. Thomas A. Welton, F.S.S.

The meetings of the Society were held during the Session in its new offices, which are found to be comfortable and commodious. The papers were read to large and attentive audiences, and were followed by interesting discussions. They are published in the *Journal*, as in the past year.

The removal from St. James's Square has necessitated a rearrangement of the books, which has not yet been completed. The Society's collection of books has been found to be more extensive and valuable than was generally supposed, and to have fallen into some disorder from the restricted and inadequate space into which it was crowded.

The Executive Committee has held its meetings twice in every month, and has transacted the current business of the Society with punctuality and dispatch, reserving and preparing for the Council all those questions which it deemed of such importance as to demand their consideration and decision.

The Society was efficiently represented at the meetings of the British Association in Belfast, and of the Social Science Association in Glasgow, as will be seen by a reference to the records of those bodies.

The Council regret to announce that no Essay was sent in for the Howard Medal, a result that is believed to be due to the fact that the Essay was required to be based on Howard's published works, of which it is not easy to obtain copies. Several persons made inquiries on the subject with a view to competition, but were probably unable to fulfil their intentions from the cause above mentioned.

The subject of the Essay for the year 1876, selected by the Council in accordance with the Rules, is—

"On the Mortality of Hospitals (General and Special) in the "United Kingdom in Times Past and Present."

A fund to collect portraits of the Founders of the Society, and of other eminent persons connected with Statistical research, was instituted during the Session. It originated in the death of Adolphe Quetelet, of Brussels, and bears the appropriate title of the Quetelet Fund. To this fund the Council subscribed ten guineas.

The President subscribed 5*l.* for a portrait of John Howard, and Miss Nightingale, and Messrs. Heywood and Newmarch presented the same amount towards procuring the portraits respectively of Quetelet, His Royal Highness the Prince Consort, and Thomas Tooke.

These portraits are now suspended on the walls of the Society's meeting room. A portrait of Charles Babbage has been presented by the artist, Mr. Frederick Piercy.

The portraits have all been executed in crayon, of life size, at a cost of twenty guineas each. One hundred pounds fifteen shillings have already been subscribed, mostly in sums of one guinea, of which seventy-eight pounds nineteen shillings have been received. The Council hope still to receive contributions from Fellows towards thus keeping alive the memories of those whose labours have been so important to the science of which the Statistical Society is the chief recognised exponent.

The countrymen of the late M. Quetelet having resolved to erect a memorial in honour of that distinguished writer and indefatigable labourer in Statistical science, and in so many other branches of knowledge, the Council, on behalf of the Society, contributed 250 francs to the fund.

The Council regret to have to report the deaths of their eminent and esteemed colleagues, Samuel Brown, a Vice-President of the Society, and Dudley Baxter, a frequent and able contributor to the pages of its *Journal*.

Messrs. Hammick and Giffen have resigned their respective offices. Mr. James Stark, for so many years our messenger and collector, has also been compelled to retire from the service of the Society. The Council have had great pleasure in providing for him a suitable retiring pension, to which the Institute of Actuaries have also contributed.

Efforts continue to be made to improve the character of the *Journal*, and to secure its punctual publication. The latter object has been attained, but the former still needs a considerable addition to the resources of the Society to secure the skilled agency by which alone it can be accomplished in a satisfactory manner.

The issue of the Society's Almanac is a feature of considerable interest in the proceedings of the past year. It has already answered the purpose for which it was intended, and it is hoped that it may in time become an important record of such matters connected with Statistical science, as find a fitting place in such a publication.

The following list of Fellows proposed as Officers and Council of the Society for the Session 1875-76, is submitted for the consideration of the meeting.

COUNCIL AND OFFICERS FOR 1875-76.

PRESIDENT.

JAMES HEYWOOD, ESQ., M.A., F.R.S.

COUNCIL.

Sir James Anderson, F.R.G.S., F.G.S.
General Sir George Balfour, M.P.
Henry G. Bohn, F.R.A.S., F.L.S.
Thomas Brassey, M.P.
Hammond Chubb, B.A.
Hyde Clarke, D.C.L.
Francis Galton, F.R.S.
*Archibald Hamilton, J.P.
James Thomas Hammick.
Frederick Hendriks.
Frederick H. Janson, F.L.S.
Henry Jeula, F.R.G.S.
Francis Jourdan.
H. Reader Lack.
Professor Leone Levi, LL.D.
William Golden Lumley, Q.C., LL.M.
Richard Biddulph Martin, M.A.
Frederic John Mouat, M.D., F.R.C.S.
*William T. Newmarch.
Robert H. Patterson.
*Henry Davis Pochin.
Frederick Purdy.
*Ernest George Ravenstein.
*Alexander Redgrave.
*The Rt. Hon. The Earl of Rosebery.
Ernest Seyd.
Thomas Sopwith, M.A., F.R.S.
The Rt. Hon. The Earl Stanhope, F.R.S.
General Richard Strachey, F.R.S.
William Tayler, J.P., D.L., F.S.A.

Those marked * are new Members.

TREASURER.

Richard Biddulph Martin, M.A.

SECRETARIES.

Frederic J. Mouat, M.D. | H. Reader Lack.
Hammond Chubb, B.A.

FOREIGN SECRETARY.

Frederic J. Mouat, M.D., F.R.C.S.

The abstract of receipts and expenditure, and the balance sheet of assets and liabilities to the 31st of December, 1874, are subjoined, together with the Auditors' report for the same year.

(I.)—ABSTRACT *of* RECEIPTS *and* PAYMENTS, YEAR *ended* 31*st* DECEMBER, 1874.

RECEIPTS.

				£	s.	d.
Balance in Bank, 31st December, 1873	£373	5	1			
Balance of Petty Cash	–	9	5			
Balance of Advertisement Cash ...	2	–	6			
				375	15	–
Dividends on Stock....................				59	6	6
Subscriptions:—						
27 Arrears	£56	14	–			
395 for 1874	829	10	–			
15 in Advance......	31	10	–			
				917	14	–
Compositions (12)				252	–	–
Journal Sales	£140	7	4			
" Advertisements	7	17	6			
				148	4	10
				£1,753	–	4

PAYMENTS.

				£	s.	d.
Rent				100	–	–
Salaries				253	15	–
Journal, Printing	£366	2	–			
" Indexes	76	16	–			
" Shorthand Reporting	17	17	–			
				460	15	–
Advertising				34	2	2
Ordinary Meeting Expenses				32	7	8
Library				39	16	–
Stationery and Sundry Printing ...				58	8	5
Postage				50	4	–
Fire and Light				28	14	3
Incidental Expenses				120	7	11
Furniture and Repairs				301	2	6
Quetelet Portrait Fund				10	10	–
Howard Medal				1	5	–
				£1,491	7	11
Deposit with London and Westminster Bank				200	–	–
Balance at Messrs. Drummond's......	£40	16	–			
Balance of Petty Cash	12	18	1			
Balance of Advertisement Cash ...	7	18	4			
				61	12	5
				£1,753	–	4

(II.)—BALANCE SHEET *of* ASSETS *and* LIABILITIES *on* 31*st* DECEMBER, 1874.

LIABILITIES.

	£	s.	d.	£	s.	d.
December number of *Journal*, Printing (say)	105	–	–			
Index	5	5	–			
				110	5	–
Miscellaneous (say)......................				350	–	–
				£460	5	–
Balance in favour of Society ...				2,358	14	6
				£2,818	19	6

ASSETS.

				£	s.	d.
Cash Balances				61	12	5
Ditto on Deposit				200	–	–
Stock:—						
New 3 per Cent. Consols (£1,271 4*s.* 8*d.*)	£1,207	7	1			
3 per Cent. Consols (£328 15*s.* 4*d.*)	300	–	–			
				1,507	7	1
Property (Estimated Value):—						
Books in Library	£500					
Journals in Stock*	300					
Furniture and Fixtures ...	200					
				1,000	–	–
Arrears recoverable (say)				50	–	–
				£2,818	19	6

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* Estimated by Assistant Secretary.

"*Auditors' Report* 1874.

"STATISTICAL SOCIETY,
"SOMERSET HOUSE TERRACE, LONDON,
"*4th February*, 1875.

"The Auditors appointed to examine the Accounts of the Society herewith

"REPORT:—

"That they have carefully compared the Entries in the Books with the several *Vouchers* for the same, from 1st January to 31st December, 1874, and find them correct, showing the *Receipts* (including a Balance of 375*l.* 15*s.* –*d.* from 1873) to have been 1,753*l.* –*s.* 4*d.*, and the *Payments* 1,491*l.* 7*s.* 11*d.*, leaving a Balance in favour of the Society of 261*l.* 12*s.* 5*d.* (being 200*l.* on deposit at London and Westminster Bank, and cash in hand 61*l.* 12*s.* 5*d.*)

"They have also had laid before them an estimate of the *Assets* and *Liabilities* of the Society, the *former* amounting to 2,818*l.* 19*s.* 6*d.*, and the *latter* to 460*l.* 5*s.* –*d.*,—leaving a Balance in favour of the Society of 2,358*l.* 14*s.* 6*d.*

"They further find that at the end of the year 1874 the number of Fellows on the list was 530, which number was diminished in the course of the year to the extent of 35 by Deaths, Resignations, and Defaulters, and that 92 new Members were elected, and the resignation of one Fellow was cancelled; leaving on the list, on 31st December, 1874, 588 Fellows of the Society.

(Signed) "WILLIAM TAYLER,
"CORNELIUS WALFORD,
"J. B. BROWN,
} *Auditors.*"

PROCEEDINGS *of the* FORTY-FIRST ANNIVERSARY MEETING.

DR. W. A. GUY, F.R.S., *in the Chair.*

THE notice was read convening the meeting: and the minutes of the last ordinary meeting were read and confirmed.

The annual report of the Council was then read.

The CHAIRMAN: It is now my duty to move that the report which you have just heard read be adopted, entered on the minutes, and printed in the *Journal.* It is not necessary to make any comments, as the report speaks for itself.

The motion was seconded by Dr. FARR and carried unanimously.

Professor LEONE LEVI and Mr. HAMMICK having consented to act as scrutineers, the ballot was taken for the election of President, Council, and Officers for the ensuing year.

The SECRETARY read the names of defaulters on the 1st of February, 1875.

The CHAIRMAN: Whilst the scrutineers are performing their duty, I will just state, in accordance with the rules which guide us in awarding the Howard Medal, that for the year 1876 the subject selected is "*On the Mortality of Hospitals (general and special) in the United Kingdom in times past and present.*" On the first occasion upon which the medal was offered, you are aware there was no competition, though there were many applicants for information. We have not yet reached the end of the month of June, at which time the essays are to be given in, and we are in hopes that we shall have some essays presented this year.

The SCRUTINEERS reported that the list of Fellows nominated by the Council as President, Officers, and Council for the ensuing year, was unanimously adopted by the meeting.

The CHAIRMAN: The members, I am happy to say, are of the opinion which the Council themselves have been, that the gentlemen whose names appear upon this list shall be for the year coming the Officers of this Society, members of Council, President, and so forth. This result necessarily follows from your vote that I have no longer the honour to be the Chairman on this occasion. I must now ask Mr. Heywood to be so good as to take his place.

Mr. HEYWOOD, the newly-elected President, then took the chair.

Mr. NEWMARCH: I have first of all to congratulate you, sir, upon assuming the chair which you now occupy. There is no member of the Society who is better entitled to occupy that post than yourself. No society could have a more consistent, judicious and zealous friend than yourself; and the fellows may congratulate themselves upon the circumstance that you have become President of this Society. But my business to-day relates rather to what has already taken place than to anything which is to occur. The function of prophecy is not one which befits me: at least, if it does, it is in a very small degree, and I hope always upon statistical grounds; but I am not going to indulge in prophecy upon statistical grounds or any other grounds to-day. I am going to move a vote of thanks to the retiring President, the Council, and Officers. For myself, I find with regret that under the compulsory operation of existing rules, Dr. Gùy must vacate his office. I am inclined to think that the rule which limits to two years the occupancy of the chair will have to be revised. Two years, in the present enlarged condition of the Society, is hardly a sufficient term during which a President can impress upon the Society any views or policy which he may hold. It is no new doctrine for me to state in this room that I regard the usefulness and progress of a Society of this kind, as in great degree dependent upon the different lines of policy which may be taken by the occupants of the chair which you now fill. What we have to avoid in this, as in all scientific societies, is getting too much into a beaten track, out of which we cannot or dare not travel. The only safeguard against that evil is to place in the chair from time to time a man of strong character and decided views, and to let that man have his way to a considerable extent. I do not mean that he shall be a despot or a tyrant, or act unconstitutionally; but that within certain defined limits he should be allowed to have his way, and to leave his mark if he can on the history of the Society. For this purpose the period of two years is too short, and I respectfully suggest to the Fellows that during your term of office the subject of the period to which the occupancy of the chair may be best limited shall be reconsidered. We have now been in existence forty years, and have acquired a certain amount of experience, and among the results of that experience is, I think, the necessity of re-considering the rule relating to the tenure of the office of President. As regards my friend Dr. Guy, his term of office has been altogether too short. We have never had a President who has more entirely devoted himself to the duties of his office. He has, during his two years of office, had the interests of the Society continually before him. He has been unceasing in suggestions, nearly all of which have been marked by that degree of judgment and discretion which have always distinguished him. He has been full of suggestions during the whole period of his office; and the present flourishing condition of the Society, to my mind, is due to the good results which have followed his administration of its affairs. Dr. Guy knows very well that my personal regard for himself would induce me to say a great deal more than I feel I can say so long as he is present; but in asking you to pass a vote of thanks to the retiring President, Council, and Officers, I am sure I am asking nothing at your hands which will not be granted with complete satisfaction, and which will not be a most inadequate acknowledgment of a debt of which we are all profoundly sensible. I trust it may be consistent with your views and with Dr. Guy's convenience that in his function of Honorary President he may continue in an active degree the assistance, and in a qualified way the leadership, which he has exercised so beneficially during the last two years. We have now been in existence rather more than forty years as a Society, and looking back over those forty years we have, I conceive, every reason to be satisfied with the character of the labours we have undertaken and with the results which have been achieved. There never certainly was a time when the purposes of the class of inquiries which we cultivate here were more widely appreciated out of doors, and when the evidence which we seek to apply to all questions relating to human societies was more eagerly sought after. I am afraid that in a certain way we have been too successful in the sense of inducing nearly every class of society to be disposed to listen favourably to statistical evidence, but not always to sift that evidence and to digest it and apply it in the way in which alone statistical evidence can be made the means of discovering truth. All figures are not facts, and all facts are not statistics, and all statistics are not truth. These are distinctions which are not always made; therefore it is that we have to confess, with confusion of face very often, that there is hardly any branch of human knowledge which is the parent of so much error as the kind of knowledge we cultivate in this room. I wish that this Society could, in a certain degree, depart from and abrogate, as it were, its first function—the function (which was quite a right one in its early years) of merely collecting facts—and devote some of its time, and a greater part of the energies of its more active members, to digest the facts which are already collected and to reduce them, as far as may be, to general formula, and now and then, perhaps, to general laws, but at all events taking up somewhat the philosophy of the subject and less of the mere dry detail of the collection and the constitution of huge tabular compilations. I hope it may happen to you, sir, during your term of presidency, to have to introduce to the Society papers in this direction. I am sure it is the direction in which we ought to move. It ought to be the function of this Society to point out to the public the needful tests to be applied to statistical inquiry, and to make them understand that it is not mere data or the collection of mere facts that is the function of the Society. As civilisation goes on, it is indispensable and it is inevitable, and it is a salutary consequence, that nearly all social phenomena can only be treated by the aid of very close statistical observation; but any observations of a statistical character, in the same way as observations of any other kind, astronomical, moral, or whatever they may be, unless they are started from the right point and founded upon the right basis, nstead of assisting truth simply hinder it, and lead the human mind astray. I rose, however, for the simple purpose of moving a vote of thanks to the retiring President and the Officers, and I now do so with very great satisfaction.

Dr. **Farr**: Perhaps I may be allowed to second the proposition of my excellent friend, Mr. Newmarch. I quite concur in the general tenor of his eloquent discourse, which I do not pretend to emulate; but I have had the opportunity of witnessing the labours of Dr. Guy, and of assisting, to a certain extent, as the previous President, in the Executive Committee; and I can assure you, Mr. Newmarch has not overstated the assiduity of Dr. Guy, his ingenuity, his suggestiveness, or his zeal and intelligence in carrying out the great objects for which the Society was founded. I think our Society was quite right in beginning first with the observation of facts; because it is one of our special functions to see that the things which are thrown into tables are facts, and to give definite meaning to the facts as expressed in figures. But the time has come, no doubt, when those facts will be thrown into general tables, so as to bring out the general principles which the Society was founded to establish. You are aware that astronomy began first by the observation of facts at Greenwich and other observatories, for instance, and after the motions of the heavenly bodies had been observed for a certain number of years, Newton came and deduced from those facts general laws. It is quite right that we should still observe and record facts, but I quite agree with Mr. Newmarch—and I am sure our past President will agree with him also—that now is the time for the younger Fellows of the Society to show us what these facts mean and to deduce general laws from the general observations at their disposal. I join most heartily in thanking our late President, Dr. Guy, for the important services he has rendered to science and to this Society.

The CHAIRMAN (to Dr. Guy): I have much pleasure in conveying to you the thanks of the Society. I am sure this Society owes much to you, especially in connection with its removal to the commodious premises which we occupy, and to which we removed during your term of office.

Dr. GUY: I am quite sure that my colleagues of the Council, and the other Officers of the Statistical Society without exception, will be very much gratified at the vote of thanks you have been good enough to pass, I am a witness to the earnestness with which they have done their work, and I can say no more of myself than that I have desired to be as useful to the Society as they have shown themselves to be. I have very great pleasure in receiving this vote of thanks, proposed as it has been by a former President and seconded by my immediate predecessor in office. I realise to the full how pleasant it is *laudari à laudatis*. I also thank you for what you have been good enough to add, that during my tenure of office I have been so fortunate as to assist in securing for the use of this Society the rooms in this College which we now occupy. Till I heard of them, the search for suitable apartments had proved a very great and serious difficulty. I have also, I hope, contributed somewhat to the comfort of such Fellows of the Society as have from time to time met in a convivial way and broken bread together. At all events, whether I have succeeded or not, it has always been my earnest desire to promote te interests of the Society, with which

I have now been connected for a very considerable period. I have not many seniors among the Fellows; but I acknowledge myself your junior, sir, by five years. If it were not that most of us who are now present are going to meet again a few hours hence, I should have spoken more at length. But before I sit down I should like to give in my cordial adhesion to the views that have fallen from my friend Mr. Newmarch, that the efforts of the Fellows of the Society should now take the direction of establishing laws and principles. We have now a very considerable collection of facts. That collection of facts is varying year by year, almost day by day; but, in course of time, there must be worked out certain principles relating to accumulated facts—principles applicable to all collections of facts without exception—principles which must ultimately come to rule and guide all prudent men in the treatment of the important matters we have to deal with. My own feeling with regard to this Society has ever been that it was not simply a collector, but also an interpreter of facts. We come to collect certain facts, because we feel an interest in a particular point; and when we have collected our facts, we see whether or not they will bear out the anticipation we had formed with regard to them. If the facts will not bear out our anticipations, then we do not say, "So much the worse for the "facts," but so much the worse for our anticipations. But if they do bear out our anticipations, it is a very great satisfaction to us as philosophers and inquirers after truth. I have always felt that, as a Society, we have a right to occupy in reference to the living unit, man, the same position which the Royal Society has so long occupied towards the other sciences. That Society deals with the whole range of science, with the solitary exception of the class of sciences which we cultivate. Let us then maintain our proper position, as being to the social sciences that which the Royal Society has so long been to the physical sciences. That is the view I have always taken of our function here, and the more we stand upon our dignity as having that function the better we shall prosper. Again, on behalf of the Council, the Officers of the Society, and myself, I return you my very warmest thanks (applause).

The CHAIRMAN: I beg to move a vote of thanks to the scrutineers for their kindness in conducting the scrutiny.

Dr. FARR: I will second that. I should like to add a word about Mr. Hammick, who has performed other duties for the Society besides that of scrutineer. He has performed those duties in a way entirely to our satisfaction. He has worked most assiduously in the interests of the Society as our Treasurer, and I believe we have seen the funds increase in his hands. I regret rather that for private reasons we shall lose his services for a time. I hope, however, to see him back again—if not in that capacity, yet in some other. I should like to propose, in addition to what you have just mentioned, a special vote of thanks to Mr. Hammick, for the way in which he has performed his duties as Treasurer.

The CHAIRMAN: That had better come on as a distinct motion.

The motion of thanks to the scrutineers was then put and carried.

Dr. **Farr**: I will now move a special vote of thanks to Mr. Hammick, our late Treasurer, for his able services in that capacity.

Dr. **Guy**: I very earnestly commend that resolution to the meeting. I have had personal communication with Mr. Hammick, both as Treasurer and as a member of the Executive Committee, and it would not be possible for any gentleman to show more earnestness in those capacities than he has always done.

Mr. **Newmarch**: I can support this resolution with great satisfaction. Mr. Hammick has been one of our real, solid, zealous supporters from the earliest moment at which he joined the Society. I am only sorry that his official avocations have prevented his name appearing more frequently in the *Journal;* but his services as one of the Census Commissioners, and his reputation as one of the chief officials of the General Registry Office, have already secured him an amount of fame which could not be added to by any reputation which he might have acquired as a contributor to the *Statistical Journal.* He has long been a most active and useful member of the Council. I hope his temporary absence will not be for long, and that we shall see him again among us enjoying stronger health, and applying for our benefit those stores of knowledge and observation which we know him to possess in so eminent a degree. I beg to offer my personal tribute to Mr. Hammick under these circumstances.

Mr. **Hammick**: I am deeply sensible of the kind expressions that have been used with regard to myself. I much regret that the state of my health obliges me for the present to retire from the active part which it has been my happiness to be permitted to take in the affairs of this Society. I have always felt the deepest interest in its prosperity, and hope still to take part in its proceedings. I thank you very much for the handsome vote you have accorded to me on my retirement from a position which will be more efficiently filled by my successor. Before I sit down, as our business has now drawn to a close, allow me to ask you to return thanks to our new President for his courtesy in the chair this day, and to assure him that we shall sit under his presidency with the greatest satisfaction. I am sure you will join most heartily in a vote of thanks to our President.

Professor **Leone Levi**: I have great pleasure in seconding this proposal. Mr. Heywood is an old friend of the Society, and we are, one and all, very glad to see him in the chair.

The **Chairman**. I thank you for your vote, and shall be very glad to have your assistance in carrying on the business of the Society.

The EFFECT *of* MIGRATIONS *upon* DEATH-RATES.

By THOMAS A. WELTON, ESQ., F.S.S.

[Read before the Statistical Society, 15th June, 1875.]

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IN the laborious and useful paper by Mr. N. A. Humphreys, read before the Society on the 15th December, 1874, reference was made to my theory and calculations on the above subject. It is not my purpose to complain of the spirit in which they were then dealt with; on the contrary, the explanation verbally given by Mr. Humphreys during the discussion which followed the reading of his paper, convinced me that it had been his wish to do ample justice to my work. But I believe it to be desirable that the records of the Statistical Society should contain a more explicit statement than he has given of the inferences I have drawn from the figures brought together in the paper I published in 1871, especially as I can now add to those figures, based upon the returns of 1851-60, information of later date.

I should be extremely sorry to have it supposed that I am "of "opinion that the Registrar-General's figures cannot be correct "because they are difficult to explain." I do not see how the Registrar-General is to be held accountable for more than the accuracy of the figures which he so skilfully presents to the public. If on examining them closely, I discover something apparently anomalous, but which is probably connected with circumstances affecting the manner of life of large masses of the people, I have good reason to feel confident that the heads of the department, men of conspicuous ability and unwearied research, will welcome any hints I can offer which promise to be of the slightest assistance to them in solving the enigma, and exploring the full meaning of the records with which they are concerned. They are certain not to hold on by the "national death-rates," except for the reason Mr. Humphreys himself has given, viz., that such figures, although subject to various qualifications, are practically useful.

Mr. Humphreys has not mentioned what I strongly brought out, that in the "outer ring" of rural population surrounding London, not only is the rate of mortality amongst females at the ages 15—25 very much higher than that which prevails in London, but it is *greatly in excess of the national average*, whilst, if we might be permitted to form an opinion of the general salubrity of the respective places by a comparison of death-rates at those periods of life when migrations have least influence (say 0—5 and 55 upwards), we should be led to suppose that some cause other than general insalubriousness or misery occasioned such excessive mortality. Let us look at some of the figures derived from the records of 1851-60:—

Age.	Annual Average Death-rates (per 1,000) amongst Females.		
	London (with Environs).	England and Wales.	"Outer Ring."
0— 5	71·4	62·7	49·0
15—20	5·5	7·4	8·3
20—25	6·4	8·5	9·8
55—65	32·7	27·0	24·3
65—75	68·4	58·7	55·0

I am not aware of any influence to which the contrast here shown could be due, which is so potent and so widely felt as that of the migrations within the district surrounding and including London, the statistics of mortality within which district were detailed at some length in my former paper.

But another aspect of the matter remains to be mentioned. Not only did I find that in every one of the eight sections into which I divided the "outer ring," the same phenomena existed so far as regards female mortality: I also found something of the same nature, but with the contrast much less broadly marked, to be true of the male population. Thus:—

Age.	Annual Average Death-rates (per 1,000) amongst Males.		
	London (with Environs).	England and Wales.	"Outer Ring."
0— 5	81·4	72·4	57·9
15—20	6·2	6·7	6·0
20—25	8·3	8·8	9·0
55—65	41·4	30·8	25·2
65—75	83·1	65·3	57·9

The only age, in the case of males, at which I found the death-rate in the "outer ring" exceeded both the national rate and that prevailing in London, was 20—25.

This is consistent with the probability that whilst many young women come to London without severing their connection with the home of their birth, young men, who gather there from the provinces in almost equal numbers, are more apt to endeavour to shift for themselves, and are more frequently expected to do so. If, then, the London rate would not be depressed by the departure of many male invalids at those ages, neither would the rural mortality be nearly so much aggravated as in the case of females.

Mr. Humphreys prefers to assume that women living in domestic service in London enjoy better health, and are liable to a lower rate of mortality than their sisters who remain in the agricultural districts. I admit, at once, that those who migrate to London are likely to include but few who are of weak constitution, and that consequently the average stamina of those who remain behind must be lower than might otherwise be the case. Yet such is the effect of a life of increased excitement and effort upon girls accustomed to the quiet habits of a village population, that I feel sure many of these emigrants lose their health after one or two years, and not a few become consumptive. I derive this opinion, no doubt, from personal observation and inquiry within a very limited sphere, and I am the more anxious that it should be thoroughly examined. But in the absence of more direct tests, what can be more justifiable than to accept the least improbable doctrine? And if Mr. Humphreys proves to be right, I think we shall have learned something more startling even than what I presumed to suggest; for I do not suppose anybody has yet consciously accepted the idea that young women between 15 and 25 in country districts (say in Suffolk) are so weak or so badly cared for as to show a rate of mortality exceeding by 50 per cent. the average of the metropolis, a place where the infantile mortality is two-thirds higher, and where the death-rates in more advanced life are nearly half as high again.

The importance which ought to be attached to Mr. Humphreys' suggestion as to the vast majority of servants being single women, and not subject to the accidents of childbirth, admits of being measured thus:—

First, we find that the proportion of women aged 15—25 who are single is nearly the same in the metropolis as in the surrounding counties, thus:—

1871. *Percentages of Women Aged as under who are Single.*

Division.	15—20.	20—25.
	Per cnt.	Per cnt.
I. London	96·6	66·9
II. South Eastern Counties	97·2	68·3
III. South Midland Counties	97·7	67·5
IV. Eastern Counties	97·2	65·3
Suffolk	97·6	65·3

Then, taking the causes of death at age 20—25 in London and in the eastern counties, for 1851-60, we have:—

	Annual Rate per 100,000.		
	London.	Eastern Counties.	Difference.
Zymotic diseases	127	141	+ 14
Cancer	5	4	− 1
Scrofula, &c.	8	23	+ 15
Phthisis	282	530	+ 248
Disease of brain	34	49	+ 15
Diseases of heart, and dropsy	34	34	—
" lungs	36	42	+ 6
" stomach and liver	31	36	+ 5
" kidneys	8	6	− 2
" generative organs	5	5	—
Childbirth and metria	51	57	+ 6
Violent deaths	15	8	− 7
Other causes	14	32	+ 18

This table shows that the excess of deaths in the eastern counties at the age in question is mainly caused by phthisis, and that the smaller number of deaths by violence in the eastern counties is by itself enough to counterbalance the moderate excess of deaths in childbirth.

Another argument against the belief that young women enjoy in London better health than they do in the country *owing to their living under better sanitary conditions* as to diet, house accommodation, and clothing, may be gathered from a consideration of the mortality they experience in the most wretched parts of the town, which may be distinguished as those where the infantile death-rate is highest:—

Average Mortality in 1851-60 (*per* 1,000) *amongst Females Residing in*

Age.	St. Giles.	Holborn.	East London.	Whitechapel.	England and Wales.
0— 5	100·1	92·1	94·2	98·2	62·7
15—20	6·5	5·2	5·2	4·0	7·4
20—25	6·4	6·9	6·6	7·9	8·5
55—65	42·7	40·9	39·2	38·7	27·0
65—75	83·3	77·5	77·8	77·9	58·7

It is not very easy to conceive that the women-servants in Whitechapel and St. Giles's enjoy an enviable fate compared with their rural sisters, and the explanation I have suggested is not such as to require this supposition.

Other questions may be asked—for instance, it is not easy to understand why, if the women who remain in the rural districts are subject to so heavy a mortality, there should not be a corresponding death-rate amongst their brothers, who are living under similar conditions. The mortality from phthisis alone, which is shown in my former paper, exhibits some curious contrasts when regarded from this point of view, thus :—

Average Mortality from Phthisis in 1851-60 (*per* 1,000).

Age.	London and Environs.		England and Wales.		"Outer Ring."	
	Males.	Females.	Males.	Females.	Males.	Females.
15—20	2·0	2·1	2·4	3·5	2·0	4·0
20—25	3·6	2·8	4·1	4·3	4·2	5·2
45—55	6·0	3·2	3·8	3·1	3·2	3·1
55—65	5·0	2·3	3·3	2·4	2·6	2·2

The male inhabitants of the "outer ring" thus show rates of mortality which are quite moderate compared with those experienced by females in the same districts. Yet it is equally true of them as of the other sex, that the more active and vigorous have been drawn away in great numbers to the metropolis and elsewhere. At higher ages (after the influence of migrations in withdrawing the best lives has done its worst) we do not find an aggravation of this disparity; on the contrary, it is most striking in the case of young people under 20.

In fact, I feel fully justified, whilst pointing out that the explanation suggested by Mr. Humphreys is not necessarily antagonistic to mine, in maintaining that there is the very gravest reason for the belief that the heavy mortality amongst females in the rural districts at certain ages is *not* to be accounted for without travelling beyond those districts; and that however much the attractions of more remunerative employment may tend to withdraw the most healthy and enterprising members of rural families, those who remain behind are by no means a bad sample of our population. I therefore repeat that "it is in the power of the authorities to "obtain statistics as to the birthplaces of the dying,* when, if I "am right, a most inadequate number of deaths of persons born in

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* No doubt legislation would be necessary before this information could be had; but such information would be of value on grounds unconnected with statistics.

"the provinces would be found to occur in London (taking into "consideration the numbers of such persons residing there) at the "ages 10—35. It might also be possible, in a few rural registration "districts, where the death-rates among females are manifestly "excessive at the same ages, to institute a careful inquiry during a "few years into the history of those persons who died at the ages "in question, so as to determine how many of them had lost their "health whilst away in London or at some other distant place, and "come home because unfit for work. *Until some such tests are "applied,* I think I am bound to infer that the recorded mortality "furnishes no reliable evidence as to the salubrity of the metropolis "or the unhealthiness of the surrounding rural districts for persons "aged 10—35."

Results of the Statistics of Mortality in 1861-70.

It would have been a heavy undertaking to have treated the statistics of this period as elaborately as I did those of 1851-60. I have, therefore, restricted myself to obtaining the ratios of mortality at certain ages in the metropolis and in eight of the surrounding counties, for each year from 1861 to 1870, and the average ratios for those ten years.

Table I exhibits the averages of the decennium. These will be found to follow the law already ascertained from the facts of the preceding ten years.

At the age 0—5 and at ages 55—75 the eight counties are many degrees more salubrious than London. At ages 10—35 the following statement shows in how many of them the mortality exceeds the London rate :—

Ages.	Males.	Females.
10—15....................	None	4
15—20....................	"	All
20—25....................	2	"
25—35....................	None	6

Table II shows the rates of mortality at the ages mentioned therein in each year from 1861 to 1870, in London (registration division) and in Suffolk.

The constancy of the phenomena may be thus shown:—

Ages.	Number of Years in which the Suffolk Mortality was				Maxima (Females).		Minima (Females).	
	Highest.		Lowest.					
	For Males.	For Females.	For Males.	For Females.	London.	Suffolk.	London.	Suffolk.
0— 5........	—	—	10	10	81·7	57·6	71·0	40·0
10—15........	3	7	7	3	5·1	7·3	3·1	3·3
15—20........	4	10	6	—	5·7	9·1	4·6	6·4
20—25........	7	10	3	—	7·3	11·4	5·8	7·2
25—35........	—	9	9	1	10·0	11·1	7·9	8·7
55—65........	—	—	10	10	39·4	23·6	30·5	18·6
65—75........	—	—	10	10	80·7	53·6	60·8	42·6

The extreme contrasts in the case of females, and the less marked, but similar contrasts in that of males, between the London death-rates and those experienced in the surrounding rural districts, are well shown by this table.

In Table III the like data are given for the counties of Wilts and Cambridge, where the infantile death-rates are respectively lowest and highest of any in the eight counties mentioned in Table I. The comparisons with London rates come out thus:—

Ages.	Number of Years in which the Wiltshire Mortality was				Number of Years in which the Cambridge Mortality was			
	Highest.		Lowest.		Highest.		Lowest.	
	For Males.	For Females.	For Males.	For Females.	For Males.	For Females.	For Males.	For Females.
0—5	—	—	10	10	—	—	10	10
10—15........	—	3	9	6	4	6	5	4
15—20........	1	9	9	1	4	10	6	—
20—25........	3	10	7	—	3	10	7	—
25—35........	—	7	10	1	—	6	10	4
55—65........	—	—	10	10	—	—	10	10
65—75........	—	—	10	10	—	—	10	10

These summaries, though dissimilar, generally resemble each other in so far as the infantile death-rates in rural counties and also the death-rates at ages 55—75, are shown to be invariably lower than in London, whilst at ages 10—35 a few of the death-rates amongst males, and the majority of the death-rates amongst females, appear to be higher in the country than in London.

One more aspect of the matter was presented in my former paper, and is too striking to be passed over without notice. I allude to the proportions existing between the death-rates of the two sexes, at several ages. The following statement will sufficiently illustrate what I mean:—

Place.	Age 0—5.			15—20.			20—25.		
	Death-rate, Males.	Death-rate, Females.	Ratio as 100 to	Death-rate, Males.	Death-rate, Females.	Ratio as 100 to	Death-rate, Males.	Death-rate, Females.	Ratio as 100 to
1851-60.									
England and Wales	72·4	62·7	87	6·7	7·4	110	8·8	8·5	97
London and environs	81·4	71·4	88	6·2	5·5	88	8·3	6·4	78
Inner ring	55·7	47·3	85	5·8	7·2	125	8·7	8·2	94
Outer ring	57·9	49·0	85	6·0	8·3	137	9·0	9·8	109
1861-70.									
England and Wales	73·4	63·6	87	6·2	6·6	106	8·5	8·0	94
London	87·2	76·6	88	5·8	5·1	88	8·3	6·2	75
Kent	60·2	51·1	85	5·4	6·2	115	7·4	7·6	103
Sussex	52·2	43·5	83	5·2	6·6	127	8·8	7·3	83
Wilts	48·8	40·5	83	4·9	6·4	131	7·9	8·4	106
Oxford	55·2	47·9	87	4·4	6·3	143	7·0	8·1	116
Hertford	55·1	48·3	88	4·4	6·0	136	6·8	7·6	112
Cambridge	62·5	51·5	82	5·3	7·2	136	7·6	7·8	103
Suffolk	53·2	45·4	85	5·7	7·6	133	8·8	9·2	105
Essex	57·5	48·9	85	5·1	7·1	139	7·5	8·4	112

It will be noticed that whilst the female death-rate at age 0—5 ranges from 82 to 88 per cent. of the male-rate, its relative regularity thus demonstrating (what needed no proof) that the local influences which affect the mortality of children of tender age are common to both sexes, the like ratios vary from 88 to 143 at age 15—20 and from 75 to 116 at the age 20—25. Such variations are natural and indeed inevitable if the explanation I have suggested is the true one. I am not so sure that they are reconcileable with the theory mentioned by Mr. Humphreys.

In calculating rates of mortality, throughout this paper, I have made use of the Census Returns of Ages as they stand. I am quite aware that they require correction, but no one that I know of has made the necessary calculations for the purpose of determining what corrections should be applied.

Table I.—*Showing the Annual Average Rates of Mortality* (*per* 1,000) *in the Ten Years* 1861-70, *among Males and Females respectively, at the Ages Specified, in the Registration Division of London, and in Eight Registration Counties.*

Ages.	London.	Kent.	Sussex.	Wilts.	Oxford.	Hertford.	Cambridge.	Suffolk.	Essex.
Males—									
0—5	87·2	60·2	52·2	48·8	55·2	55·1	62·5	53·2	57·5
10—15	4·3	3·7	3·5	3·5	3·3	3·4	3·9	3·9	3·8
15—20	5·8	5·4	5·2	4·9	4·4	4·4	5·3	5·7	5·1
20—25	8·3	7·4	8·8	7·9	7·0	6·8	7·6	8·8	7·5
25—35	10·9	9·6	9·6	9·1	8·7	8·2	9·3	8·9	8·9
55—65	44·0	27·5	27·0	26·0	26·2	26·5	24·0	23·5	26·4
65—75	83·2	59·2	58·3	59·7	60·8	61·3	57·7	51·6	59·0
Females—									
0—5	76·6	51·1	43·5	40·5	47·9	48·3	51·5	45·4	48·9
10—15	4·1	4·2	4·1	3·8	4·1	3·9	4·3	4·8	4·5
15—20	5·1	6·2	6·6	6·4	6·3	6·0	7·2	7·6	7·1
20—25	6·2	7·6	7·3	8·4	8·1	7·6	7·8	9·2	8·4
25—35	8·8	9·0	8·9	9·3	9·0	8·2	9·1	10·0	8·6
55—65	33·6	23·4	23·5	24·9	23·8	23·5	21·2	21·1	22·9
65—75	67·6	52·9	53·3	57·3	56·5	54·3	47·7	47·0	51·9

TABLE II.—*Showing the Rates of Mortality* (per 1,000) in each Year, from* 1861 *to* 1870, *among Males and Females respectively at the Ages specified, in the Registration Division of London and the Registration County of Suffolk.*

Year.	Age 0—5.				10—15.				15—20.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.
1861....	84·6	59·2	75·4	51·7	4·1	4·2	4·1	5·2	5·9	6·1	5·0	8·8
'62....	82·2	49·4	72·7	43·0	4·1	3·4	4·1	4·8	5·5	5·0	5·3	6·4
'63....	89·0	66·3	77·1	57·6	4·7	6·7	5·1	7·3	6·2	7·2	5·4	8·5
'64....	92·5	56·0	81·7	47·1	4·4	5·1	4·1	5·8	6·2	6·7	5·4	9·1
'65....	85·9	53·1	77·1	46·7	4·5	3·4	3·8	4·9	6·2	5·4	5·0	6·5
'66....	93·7	49·4	81·7	44·8	4·9	3·1	4·7	3·7	6·6	5·2	5·7	8·4
'67....	80·8	50·5	71·0	41·5	3·4	3·3	3·1	4·3	5·4	5·3	4·8	6·4
'68....	86·0	46·1	75·5	40·0	3·9	3·3	3·7	3·3	5·6	4·9	4·9	8·1
'69....	91·2	51·6	80·9	41·0	4·2	2·5	4·1	3·9	5·5	4·9	4·6	6·8
'70....	86·5	50·1	73·0	41·5	4·4	3·6	4·1	4·6	5·6	6·5	5·1	7·2

Year.	20—25.				25—35.				55—65.				65—75.			
	Males.		Females.		Males.		Females.		Males.		Females.		Males.		Females.	
	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.	London.	Suffolk.
1861....	7·2	8·8	5·8	11·4	9·6	9·6	7·9	11·1	41·4	23·3	32·2	23·6	82·8	56·2	66·0	44·7
'62....	8·4	7·9	5·9	10·2	10·1	9·0	8·6	9·1	45·4	20·8	33·5	18·6	82·6	48·3	67·9	43·3
'63....	8·1	10·0	6·3	10·9	10·4	9·9	8·8	11·0	43·7	25·6	32·0	20·9	80·9	48·5	63·7	45·0
'64....	9·1	10·2	6·8	10·9	11·5	9·0	9·7	9·9	49·7	25·6	39·4	20·3	91·0	55·3	80·7	46·4
'65....	8·3	9·6	6·2	9·6	11·4	7·8	8·9	10·3	45·7	23·7	35·4	19·5	87·1	55·4	68·0	51·9
'66....	9·8	9·1	7·3	8·5	12·7	7·8	10·0	8·7	45·9	22·9	36·1	21·2	84·5	48·8	71·7	46·1
'67....	8·4	8·2	6·0	7·2	10·9	8·5	8·4	9·5	43·1	23·2	32·0	23·4	80·6	49·7	66·4	48·4
'68....	8·2	8·6	6·0	7·9	10·9	8·9	8·7	10·0	40·4	22·7	30·5	20·7	77·8	46·2	60·8	42·6
'69....	7·5	8·0	5·9	8·0	10·3	9·7	8·7	9·4	42·9	23·4	31·5	20·7	80·8	55·4	65·2	48·4
'70....	7·6	8·1	6·0	7·4	11·1	8·8	8·7	10·4	42·4	24·0	33·5	22·0	84·6	52·6	66·0	53·6

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* The populations used in calculating these death-rates are assumed to have increased equally in each year between 1861 and 1871, and are calculated on that footing for the middle of the respective years. This table and the next may be usefully studied for the purpose of ascertaining the extent to which death-rates, even for wide districts, may be expected to vary from one year to another.

TABLE III.—*Showing the Rates of Mortality* (*per* 1,000) *in each Year from* 1861 *to* 1870 *among Males and Females respectively, at the Ages specified, in the Registration Countie of Wilts and Cambridge.*

Year.	Age 0—5.				10—15.				15—20.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.
1861....	45·7	71·5	35·8	64·9	3·0	4·5	3·6	5·1	5·8	6·5	6·1	7·3
'62....	51·7	59·5	37·9	48·6	4·1	5·5	3·5	4·8	4·8	5·7	5·8	9·3
'63....	53·2	67·5	47·6	59·8	4·2	3·6	4·4	5·2	5·2	4·9	7·5	9·0
'64....	55·6	66·3	44·5	52·6	4·1	5·5	4·3	5·3	6·9	6·6	7·5	8·4
'65....	46·5	68·4	43·5	55·6	3·8	8·3	5·8	3·7	5·6	5·3	8·3	6·7
'66....	44·7	57·2	35·7	43·1	3·2	3·1	2·8	4·3	4·0	5·5	6·4	7·3
'67....	47·4	55·0	37·4	44·6	3·1	3·6	3·0	3·7	4·0	5·7	5·3	6·4
'68....	39·6	58·5	35·6	49·9	2·5	2·8	3·9	3·5	4·6	3·5	6·1	5·7
'69....	44·9	57·6	37·1	45·2	2·8	2·7	2·8	4·2	4·1	4·0	4·3	6·0
'70....	58·7	64·3	49·7	48·9	3·8	4·4	4·1	3·6	4·4	5·0	6·8	5·7

Year.	20—25.				25—35.				55—65.				65—75.			
	Males.		Females.		Males.		Females.		Males.		Females.		Males.		Females.	
	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.	Wilts.	Cambridge.
1861....	8·3	9·1	8·3	9·1	8·4	8·7	8·8	9·2	26·0	21·9	25·2	24·5	50·4	50·6	57·8	40·7
'62....	7·8	8·1	7·5	8·2	9·3	9·7	9·7	9·1	22·2	24·3	22·5	21·4	58·0	53·7	55·0	52·3
'63....	7·7	8·5	10·0	8·7	9·9	10·2	9·6	9·6	28·3	22·7	25·5	21·2	58·5	66·1	57·5	51·8
'64....	8·9	6·4	9·7	8·9	8·5	9·9	10·3	9·6	28·6	24·9	27·6	23·2	61·3	64·8	62·6	51·7
'65....	9·5	6·6	9·8	6·8	9·1	9·4	9·2	10·0	28·1	28·0	24·9	22·6	60·4	49·2	57·6	48·7
'66....	7·8	7·8	7·8	8·1	9·5	9·8	7·8	10·7	23·6	22·6	21·7	17·4	64·6	58·9	51·3	44·1
'67....	7·1	9·0	9·7	6·9	9·0	8·8	8·4	10·0	26·9	23·5	25·1	22·7	59·1	55·2	56·2	47·4
'68....	7·5	7·6	7·3	8·4	8·8	8·0	8·7	7·9	24·6	22·2	24·4	19·4	54·8	58·9	49·7	40·3
'69....	6·3	6·4	6·2	6·7	10·0	9·3	9·6	8·3	28·1	23·9	24·6	19·3	66·6	57·0	59·8	49·5
'70....	8·4	7·2	7·4	6·7	8·9	9·1	10·8	7·1	23·1	26·1	27·5	20·6	62·5	62·2	65·0	50·6

DISCUSSION *on* MR. WELTON'S PAPER.

MR. N. A. HUMPHREYS said that nobody could be more interested than himself with the manner in which the statistics of mortality in and around towns had been treated, because the paper which he read some time since before the Society touched upon so many branches of vital statistics that it was impossible to do justice to this part of the subject. Mr. Welton had brought forward a theory that was not new, namely, that the male death-rates between 10 and 25, and of females between 10 and 35, are considerably lower in towns than they are in rural districts. This was found to be the case in nearly all towns and country districts. Mr. Welton had, he thought, clearly made out his case that the salubrity of a place could not be decided by its death-rates at *these* ages. Although Mr. Welton made a protest, he (Mr. Humphreys) still maintained that his theory was more or less one which could not be supported by facts, because the death register did not give the information necessary to decide on the various points at issue. The object of his (Mr. Humphreys') paper was to maintain the general usefulness of the death-rates at *all* ages, and to combat, as far as possible, the various grounds on which their trustworthiness had been attacked. Mr. Welton had conclusively shown that the death-rate of males and females in London at certain ages was so much below the average death-rate of England and Wales. It appears that the rate of mortality among males, at all ages, in London in the ten years 1861-70, exceeded the rate in England and Wales by 12½ per cent., and among females by 5 per cent. It will be interesting to inquire how many deaths should be added to London in order to raise the death-rate of those ages to the same excess as prevailed at all ages, and what effect that would have on the general death-rate at all ages. He had looked at the matter carefully, and found that in London in one year it would be necessary for the deaths of 382 males, from 10 to 25 years, and of 948 females to be added in order to raise the mortality at those ages as much in excess of the rate in all England, as is the rate at all ages in London compared with all ages in England and Wales. It was only necessary to add 1,330 deaths to London, and it would be well next to see what general effect that would have on the death-rate at all ages. He found that the death-rate at all ages, after this addition, would be only increased by 0·3 per thousand among males, 0·6 per thousand females, and 0·4 per thousand persons. The increased rate of mortality in London by this addition would be less than half per thousand in a year. This small effect affords no excuse for depreciating the use of general death-rates for the purpose for which they were usually applied. He (Mr. Humphreys) had assumed in his paper that the death-rate might be affected by the large proportion of domestic servants who were unmarried, but it appeared that the proportion of unmarried women in London differed very little from that in the rural districts, and he still thought that the difference in the death-rate was so striking among females at the ages under discussion that it could not entirely be accounted for by Mr. Welton's theory, for this reason. In examining the proportion of persons living, the excess per thousand of females between 10 and 35 living in London was very small compared with Suffolk. With regard to males, he found fewer per thousand living in London from 15 to 25 than there were either in all England or in Suffolk. With regard to females, he only found an excess of 23 per thousand in London as compared with England and Wales, and only 37 as compared with Suffolk. It was impossible that the whole of this disturbing influence could be caused by this very small excess of females, some of whom were said to go back to the country to die there. With regard to the high rate of mortality among sickly or weakly children, it appears possible that after this mortality has killed off most of the sickly ones, the children in towns may die at a lower rate between the ages of 10 and 20 in towns than in the country. Those out at school and in the streets were not so liable to the influence of unhealthy homes, which was the principal cause that destroyed life. Children of tubercular or scrofulous tendency might die early in towns of tabes mesenterica or hydrocephalus, whereas in the country they might survive to later ages and afterwards die of consumption. That was a mere theory, but the facts seemed to show that the difference of mortality at these ages was so very large that it could not be easily accounted for, and that the excess of people in towns and in London at these ages was so small that the disturbance in the death-rates could hardly be due to these influences on such a small excess of population.

Dr. LETHEBY, after expressing the gratification it afforded him to hear the paper read, said he was glad to find that Mr. Humphreys had modified the opinions he had advanced on a former occasion, in regard to the difference of mortality in London as compared with the country. There was one broad fact to which Mr. Welton had particularly directed attention, namely, that while there was a larger proportion per thousand of the population in towns at particular ages—say from 15 to 35 or from 10 to 25—there was a smaller death rate. They might reason about it as they pleased, but the fact was as strong as could be that London and our large towns were not healthy for people of those ages, and if they were in the large towns in larger numbers and died in smaller numbers they must be displacing each other, for there was no other explanation. When they got sick they moved into the country and others took their places; besides which, the population was largely increased by persons at those particular ages, so that a healthy population was kept up in the metropolis and their death-rate was noted elsewhere. Again it was a remarkable fact, and one which to officers of health was very significant indeed, that in the particular diseases of which these people die the death-rate is less in London than in the country. Why was it that the mortality from phthisis was twice as high in the circles around London as in London itself?

Experience showed that when servants and labourers and mechanics, and those who constitute what may be termed the strength of our town populations, became ill of these diseases, they did not stop in London to die, but went away to the country, so that the broad fact remained that the mortality was not credited to London but to other districts. Although he had not altogether come to the conclusion that the true means of estimating the sanitary condition of any particular place was by noting the death-rate at particular ages, as for example up to 10 or after 45 or 55, yet it undoubtedly was a far more satisfactory way of arriving at the probable sanitary condition of a place than by taking the gross death-rate. He had listened with very much pleasure to Mr. Welton's paper, which was a great addition to the knowledge already possessed on the subject, and it still confirmed him in the opinion that the sanitary condition of large towns was not to be determined by the general death-rate, and this was especially so in the towns mentioned by Mr. Humphreys, namely, Barrow-in-Furness and Middlesborough-on-Tees—two places which were positively living on the strength of the people, and which fifty years ago were not towns at all, for they had become what they were by the accident of industry, drawing into them the young, the hale, and the strong, and turning out their sick. He thought that if we were to measure the sanitary condition of such places by the death-rate we should fall into grievous error.

Mr. **Rawlinson**, C.B., said that it occurred to him many years ago, in the prosecution of his duties as sanitary inspector, to examine the mortality returns for the different towns in Great Britain, and without looking to the facts he was very much astonished to find that wherever the mortality exceeded 10,000 there was a surplus of female population, and that in populations under 10,000 there was a surplus of male population. That might have something to do with the death-rates that had been laid before them. Upon reasoning the matter out, he found that this wonderful civilisation of ours attracts into the centres of population females for various useful and domestic purposes, and he was ashamed, as an Englishman and a Christian man, to say that it also attracts females in large numbers for purposes which could scarcely be named in that room, and these facts must be taken into consideration in calculating death-rates; and these disturbing elements must also be taken into account when comparing town with country. He could not help agreeing with the able remarks of the last speaker, that the town sickens the healthy and the country receives the dying; therefore, in tabulating the death-rate for town and country, the country must not be debited with all the mortality it records, neither must the town be credited with all appearance of health it exhibits. These facts must be taken into consideration, and when the Society had before them a paper which would fairly state—if it could be stated—the facts that he had intimated, they would have something more to be relied upon than the gross statements taken from the tabulated returns without any consideration of these details.

Dr. FARR, said he should like to know from Mr. Lumley his opinion as to how the law of settlement operated upon the removals from the towns to the country.

Mr. LUMLEY, Q.C., said he did not believe it had the slightest influence whatever. People now rambled about as they pleased without being afraid in any degree of being removed. A year's residence in any place rendered a man perfectly immoveable if he went to work more or less diligently. Servants went where they liked and as they liked. They went to the towns because they found employment there, or because they found it more agreeable to live there. When they fell sick they might, to a large extent, probably return to the country, but he was not certain that there was such a large emigration from this cause at the present time as had been inferred. The question had not been sufficiently worked out to form a decisive opinion upon it.

The Rev. WYAT-EDGELL, having had some experience of hospitals, thought that the sick poor, whether they were in service or in trade, or were labourers generally, went into hospitals, but that the proportion who died in them bears a very small ratio to those who entered, and the reason was, that when they are pronounced to be dying they go to their friends in the country. He should like to ask one question, namely, why farmyards were so unhealthy? The most insalubrious of any situation a person could be in was in the neighbourhood of a farmyard.

Mr. S. BOURNE said that the suburban district in which he lived was of a very limited extent, and although not a medical man, every cause of sickness came under his knowledge. He had been struck with the very important fact that sickness among females very largely preponderated over that of the males. For one man that came under his notice as being sick there were six women. He had also found that the girls and the young women leave the district and go into the metropolis for domestic service, but almost invariably when they get any accidents or illness, they go into the hospitals and get treated; but when they get convalescent, they come out of the hospitals and go home to their parents, and remain for a long period in a chronic state of ill-health, which tends very much to increase the average amount of partial sickness in the neighbourhood. He had also found that there is a great deal of sickness amongst the aged women. In the West Indies the average amount of sickness amongst the men is less than amongst the women, but the average number of deaths is far greater; and so he found in the neighbourhood in which he lived the sickness is oftener brought to a rapid conclusion with the men than the women. Women have the advantage of living at home and being cared for, and not being so much forced to work when they are ill, and consequently in their case there is a greater prolongation of life. He had also observed that aged women who have been in service, or may have been left widows, come back to the neighbourhood where their connections live, and linger and die. Men are not so prone to do that. But whatever the reason, the fact remained that there is a greater amount of sickness among the females than amongst the males, whilst he did not think the number of deaths is so great.

Dr. FARR, F.R.S., had no doubt of the truth of what Mr. Bourne had said, that there was more apparent sickness among women than men. This was the case in Friendly Societies, but whether it was owing to their sickness being of greater intensity than that of men, he did not know; he doubted it. He was very much pleased to hear a paper from Mr. Welton, who was one of the most earnest labourers in the cause of statistics. He had exemplified what he had before said, and what he (Dr. Farr) and others were not inclined to doubt, namely, that the mortality, though high in towns generally at nearly all ages, is yet low at those particular ages. The only difficulty arose when they came to ask for the explanation. He had himself thrown out a suggestion, that it is possible and probable that women becoming ill before they are married, and having parents in the country, when they are attacked with a disease, such as consumption, go home. If they are in service, they would be kept for a certain time; then they are sent into the hospitals, which keep them only a certain time; and then they might go to the parish, for Mr. Lumley had said they were not obliged to leave London unless they liked. The subject, he thought, was one well worthy of investigation, and he should be glad if the Registrar-General had the power to instruct the registrars to inquire of the people dying from consumption in the outer ring or the suburbs, where they were attacked or when they began to feel ill first, or whether when they became consumptive in the town they went back home to die. A small number of persons ill at this age would turn the scale. Mr. Humphreys had shown ingeniously that a few hundreds would make all the difference in the rates, and that the transference of a certain number of deaths from London to the country, or *vice versâ*, would make all the difference in the ratio of mortality at those particular ages. He hoped that Mr. Welton's paper would lead to that further investigation, because it was quite certain that it was not yet known how much the difference in mortality was due to the causes which had been mentioned. It was quite apparent, however, that the mortality in towns was understated at these ages, and the general death-rate of towns, as compared with the death-rate in the country, understated the sickness and suffering and mortality in these towns; but Mr. Humphreys had shown that the effect on the general death-rate produced by the difference at the ages 10—25 was not considerable. It certainly did not impair the utility of the death-rate as a general method of investigation and inquiry. At the Registrar-General's office they had been calculating, as was done ten years ago, a series of tables for every district in the country, showing the mortality of males and females at fourteen different ages. The general death-rate was only a preliminary thing. It was followed up with the mortality at each age in each class of people; and after that they inquired what was the mortality of each age by several diseases, and in that way they obtained a better view of the statistics of the country. It was necessary to have a register of the prevalent diseases of the country, and he hoped the discussions in the Society would lead to it now. Dr. Letheby had referred to Middlesborough and Barrow-in-Furness. To the latter place the people were brought by the various manufactories without any sanitary arrangements, and the consequence was a high rate of mortality; but the sanitary condition had been improved and the mortality was reduced. Middlesborough had not yet followed the example, but from the high rate of mortality of that town, no doubt better sanitary arrangements would soon be made. Mr. Welton's communication, he thought, was a valuable one. He had proposed a problem which was not yet solved, and which required facts to solve it. He quite agreed with Mr. Humphreys that the disturbance in the death-rate was not sufficient to impair its uses. The general death-rate was no doubt an excellent guide, but to satisfy the scientific mind further research was demanded.

Dr. MOUAT was unable to speak of the effects of migration on death rates in the particular area considered in the paper of Mr. Welton, but he could mention examples of the soundness of the general truth advocated by that gentleman, from his personal experience in another and a distant country.

For example, when he joined the Bengal Army in 1840, and was in charge of a native infantry regiment at Barrackpore, he found the recorded death rate to be extremely low—so low as to excite a suspicion of its accuracy. Within a week of his joining the mystery was solved. Three men, sick beyond a hope of recovery, applied for leave to go to their homes to die, and the leave was granted, in spite of his remonstrance that the men were not likely to reach their homes alive. They all died and were struck off the rolls on the expiry of their leave, but the casualties were not debited to the regiment. On making inquiry he found this to be the practice in the other sepoy corps in the same command, and he was informed by the superintending medical officer that it was general throughout the native army in Bengal. The men were much attached to their homes, seldom or never had their families with them, wished to die among their relatives, and, if Hindus, the desire was strengthened by religious motives. Except on foreign service and inaccessible places, such as Assam and Aracan, no difficulties were placed in the way of sick sepoys obtaining leave, if they desired it; and in this manner very many must have died who were not accounted for in the mortality lists of their respective regiments. This form of migration then, had it been properly accounted for, would have modified very considerably the assumed healthiness of the native soldiery of the Bengal Army, particularly in parts of the country foreign to them.

A similar source of fallacy exists with regard to the published death rates of Calcutta at the present time, which for natives are really higher than the returns would seem to show. Dr. Mouat doubted if the very large fluctuating population of Calcutta had been properly accounted for in the last census in 1872, when the number of inhabitants was represented to be 447,601, according to

Mr. Beverley's report. But, apart from this, which introduced a serious element of disturbance, was the fact that a considerable proportion of the population of the metropolis of British India consisted of strangers from other parts of the country who left that city when sick and had the means of doing so, and of these it is not known how many die at their homes or on the road to them. As facilities of movement in all directions had increased since the introduction of railways, this migration of the sickly had considerably increased likewise. Their places were constantly supplied by healthy people of the same classes, and as their deaths are not debited to the city, the apparent is assuredly not the real death-rate. Again, large numbers of up-country men, domestic servants, artisans, traders, and others do not bring their families with them, hence the proportionate deaths of women and children who remain in their homes, are of necessity not accounted for in the Calcutta returns.

All this shows the accuracy of the views enunciated in the excellent paper of Mr. Welton, and the soundness of the conclusions of Dr. Letheby on the subject.

In answer to questions put to him, Dr. Mouat was unable to speak of Madras and Bombay from personal knowledge. Regarding the latter especially, with its active and busy population, he suspected that something of the same kind, in the way of the migration of the sick whose homes were at a distance, probably occurred.

Dr. **Farr** explained that in the City of London there was only a very small number of people in the night time, but in the day time it was crowded. The deaths were reckoned on the population in the city in the night time, and in the country round, in the outer ring, the deaths were compared with the population sleeping there. He should like to know if that occurred in Calcutta?

Dr. **Mouat** was not sure that it did, and had some reason to believe that the census of Calcutta was in that respect somewhat defective. Many of those who lived outside were probably returned as part of the city population, which would give a fallacious result. He mentioned this as establishing the correctness of the position taken by Mr. Welton and Dr. Letheby, that the recorded death-rate was not a true indication of the salubrity of any such city.

Mr. **Rawlinson** said, that as a member of the Sanitary Committee he had been struck with the low rate of mortality in the different provinces of Calcutta, Madras, and Bombay; and he should like to know from Dr. Mouat if the same argument that applied to Calcutta, would apply to Bombay and Madras.

Dr. **Mouat** said he had so little personal knowledge of these places that he was unable from his own experience to answer the question, but Dr. Rankin might do so.

Dr. **Rankin** said he could not answer the question in regard to Bombay, but there was not the same means of the population of

Madras leaving the limits of the town proper as there might be in Bengal. No doubt large numbers came in with the market supplies, but not within a circle of five or six, or seven miles.

Dr. **Farr**: Not to be included in the resident population?

Dr. **Rankin** thought they might be included in the resident population, but there was no proper record. The condition of regimental life in Madras was different from Bengal, as the Sepoys had their families living with them, and the population was accurately returned by adjutants and officers. He found, in most instances that the mortality exceeded 35 per thousand. In some regimental lines it was as much as 75 per thousand. Out of two regiments he tabulated before he left it was 35 per thousand, whereas the district mortality was 14 or 15 per thousand.

General **Babbage** said that in the Punjaub the census was taken on the night population, but a sort of preliminary investigation was made by going from house to house and taking the number of permanent inhabitants. The names of the visitors were also taken on that occasion, and, as far as his memory served him, the number of visitors was very considerable. He was surprised at the moving population that slept out. The register of deaths in the Punjaub was excessively imperfect.

Mr. **Thomas A. Welton**, in reply, said he did not intend to refer to anything he had said that he had expressed any doubt about. He felt the general usefulness of death rates, and that they had a great practical value. If, however, any one would take the trouble to look at the ages of the inhabitants returned as sleeping in the City of London they would find the numbers between 15 and 20, and between that age and 25, were greater than the numbers under 5 years of age, and it was a population to a very great extent of imported and very healthy lives; therefore, with all possible respect for the authority of Dr. Farr and Dr. Letheby, he would say that the general death-rate of the City of London was one that would have to be very closely looked at. As regards what Mr. Humphreys said in reference to the population in London, from 10 to 20 or from 10 to 25 being small, he was afraid he should be obliged to trouble the Society sometime in the future with a paper on "Emigration from the Country to London." He had not the slightest doubt that the London population contained an enormous number of persons who had come in at ages between 12 and 20. The high mortality not only destroyed the weaker lives but he believed the same causes pulled down the health of those who, if they had lived in another place, would have been in good health from infancy upwards. As regards the remark that the difference in mortality was so great that the return of servants and others to their homes could not account for it, Mr. Humphreys had said in another part of his remarks that the total number of deaths required to be transferred was only small; and if so small a number was all that need be transferred from the country back to London in order to cure what he had called attention to, then it was quite clear that the disparity was not so large but what it may be accounted for in the manner suggested. Suffolk was his own county, and he knew that the affection that existed between humble people and their children in Suffolk was such, that the first thought of a girl in London whose health failed her, was to write home to her mother and go home, especially in such a disease as consumption. He was very much indebted to the gentlemen present for the kind way in which they had referred to his paper.

NOTE *on the* MARRIAGES *of* FIRST COUSINS. *By* GEORGE H. DARWIN, ESQ., M.A., *Fellow of Trinity College, Cambridge.*

AFTER I had read my paper on this subject in March last* before the Statistical Society, Mr. Arthur Browning (a Fellow of the Society) suggested to me another method of determining whether cousin marriages were injurious or not. This method was to discover whether the proportion of offspring of first cousins, amongst persons distinctly above the average, either physically or mentally, was less or greater than the general proportion given by my paper for persons in a similar rank of life.

Mr. Browning and I agreed to carry out this scheme together; but we thought it would be well to delay extensive operations, until we saw what success was attainable in a more limited inquiry. The results are so very unequal to our expectations, that we do not intend to proceed further. The statistics are, however, of some interest, as far as they go.

The boating eights, who race at Oxford and Cambridge in May, are a picked body of athletic men. There are twenty boats at Oxford, and thirty at Cambridge, in the "first and second divisions;" and their crews are 400 men, exclusive of coxswains. We accordingly sent circulars to the stroke-oars of these fifty boats, during their preparatory training, begging them to ask the members of their crews whether their parents were first cousins or not. Where there were several brothers rowing in the eight, they were only to be counted as one case; and cases of refusal to answer were also to be marked. We received answers from nineteen Oxford crews, and from eighteen at Cambridge. Three or four men appear not to have been asked, probably on account of their absence at the time that the circular was being filled up. And there were two cases of two brothers rowing in the same boat, but they were not offspring of first cousins. We here beg leave to return our warm thanks to the gentlemen who so kindly answered the queries.

Besides these answers, the circular addressed to the stroke of the second boat of Corpus College, Cambridge, came back to us with a carefully falsified return; it was by mere chance that I was able to detect the fraud.

One member of a crew was accidentally disabled, but we have thought it proper to include him, as well as his substitute; he is a son of first cousins.

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* See *Journal* for June, 1875, p. 153.

Altogether the parentage of 290 men belonging to different families was ascertained, and of these seven were found to be offsprings of first cousins, and one man refused to answer the query. The result is therefore that 2·41 or 2·75 per cent. (according as we exclude or include the case of refusal) of boating men are offspring of first cousins. The proportion of first cousin marriages to all marriages, amongst the same class of society, was determined at 3 to 3½ per cent. in my former paper. Thus these numbers appear, to some extent, to justify the belief that offspring of first cousins are deficient physically, whilst at the same time they negative the views of alarmist writers on this subject. But taking into consideration the smallness of the number 291, and the uncertainty of my previous methods, the indication is very slight.

The next step was to send circulars to masters at sixty-five of the principal schools for the upper and middle classes in England. We begged them to put the circulars before the School Natural History Club, or else into the hands of any boy who would be likely to take an interest in the investigation. The collector of statistics was asked to form a list of the best cricketers, foot-ball players, and other athletes, such list not to comprise more than 20 per cent. of the whole school; and only one of several brothers was to be entered therein. Each of the boys on the list was then to be asked whether his parents were first cousins or not, and the answers to be returned to us.

Returns were, however, only received from six schools. The work was in most cases undertaken by the masters themselves. We here beg leave to thank all the collectors for their great kindness.

The following table gives the numbers of boys from whom the selection was made, and the numbers on the selected lists :—

School.	Number of Boys.	Selected Athletes.	Percentage of Selected List compared to the Whole Number of Boys.
Rugby	171 over 16 yrs. of age	84	19·9
Sherborne	243	89	16·0
Lancing	145	15	10·3
Taunton	130	18	13·8
Giggleswick	120	24	20·0
Bury St. Edmunds	64	13	20·3
Total	873	143	16·4

At Rugby and Sherborne the standard of athleticism is high, as also at Lancing and Taunton, where only about one boy in ten was taken from the whole school. At Bury St. Edmunds it would be rather low, but at Giggleswick allowance was made for the ages of the boys, so that the 20 per cent. was distributed over the whole school.

Out of the 143 athletes, one was the offspring of first cousins, a sturdy boy in the highest class of his school; and three either did not know, or refused to answer the query.

These figures are thus almost nugatory, for we have from one to four offspring of first cousins amongst 143 boys, that is to say from 0·7 to 2·8 per cent. Combining the boating statistics with these we get from eight to twelve sons of first cousins amongst 434 athletes, that is to say from 1·84 to 2·76 per cent.

I take the higher number, 2·76, as probably more near the truth than the lower one. The same remarks as those made on the results of the boating inquiry are therefore applicable to the whole.

The following observation of Mr. Browning, with respect to longevity in children of consanguineous parents, is perhaps worth giving.

He is a director and the honorary secretary of the French Protestant "Hospice," where forty old women and twenty old men, descendants of French refugees, find a comfortable home. They are seldom admitted much under 70, and their average age is 77; three or four are over 90. They were questioned as to whether their parents were first cousins. Out of thirty-seven women, four were absent and four were ignorant as to the fact; out of the remaining twenty-nine, one was the daughter of first cousins. Out of twenty men, three were absent and one was ignorant; of the remaining sixteen, none were offspring of first cousins. Thus, out of fifty very aged persons, one was the offspring of first cousins, and five were uncertain as to the fact. The steward, a man of about 40, also a descendant of French Protestant refugees, had married his first cousin. These people are in the fifth or sixth generation from the original refugees. In the earlier generations there would doubtless have been much intermarriage amongst them, but Mr. Browning says that they now have almost entirely lost their French characteristics, and are merged in the general population. If, however, there is *any* class feeling remaining, cousin marriages would be doubtless more prevalent amongst them than elsewhere.

With respect to intellectual powers, I happen to know that amongst the sixty Fellows of one of our larger colleges at Cambridge. there are two sons of first cousins, and there may be more; the tenure of a fellowship betokens, at least, great power of acquiring knowledge.

Since March last, Mr. Huth's work on "The Marriage of Near

"Kin" has appeared, and I find therein some confirmation of my own results as to the prevalence of cousin marriage in England.

It appears (p. 210) that M. Dally examined the registries of the *mairie* of the eighth district in Paris, and found that out of 10,765 marriages celebrated between 1853 and 1862, 141 were between first cousins, eight between uncles and nieces, and one between a nephew and aunt—total, 150 consanguineous marriages within the above degrees. "(These numbers may vary from 146 to 152, on "account of three figures which are uncertain). These numbers "give us a proportion of 1·4 per cent., and it appears to me (*i.e.*, "M. Dally) impossible to admit otherwise than this—that in a "district of Paris which is inhabited by foreigners, showing a "considerable floating population, there are many less marriages "between cousins than in the midst of small towns, and in the "country."

Now, it will be remembered that I estimated the proportion of first cousin marriages in London, by a totally different method, at 1½ per cent., which lies very close to 1·4 per cent.; and it would be likely that the proportion of consanguineous marriages in two such immense towns as London and Paris would be nearly the same. M. Dally further considers himself authorised (from the context, I presume by M. Legoyt, the chief of the Statistical Department of France) to say that M. Boudin's estimate of 0·9 per cent. for marriages over the whole of France within the above degrees, is between three and four times too small; according to M. Legoyt, therefore, the proportion for the whole of France lies between about 2½ and 3½ per cent. This estimate may be compared with my results of 3 to 3½ per cent. for the upper classes, 2 per cent. for the larger towns, and 2¼ per cent. for the country, and as far as it goes, it tends to confirm my figures. I should certainly expect that the equal division of property under the "Code Napoléon" would tend to promote first cousin marriages, as the family property would be thereby kept together. On the other hand, the Roman Catholic Church discourages these marriages; yet it is stated (p. 209) that legal dispensations are only requisite for marriages between uncles and nieces, and between nephews and aunts, and not for those between first cousins, so that the discouragement would not be likely to be very efficacious.

It cannot be doubted that M. Boudin's estimate of 2 per cent. for consanguineous marriage within the degree of second cousins, is very far too low for France; probably 5 to 8 per cent. would be nearer the mark.

It is stated (Huth, p. 212) that the Irish Census Commissioners found that in 1871 6·7 per cent. of the parents of deaf-mutes were cousins within the sixth degree; in 1861 6·9 were cousins within the fourth degree; and in 1851 4·9 were cousins within the third degree. These figures have been taken to show the appalling injury resulting from consanguineous marriages; if, however, M. Legoyt's estimate for France may be taken as even nearly accurate, and may be extended to Ireland (also chiefly Roman Catholic), these figures would rather show that the evil has been exaggerated. Altogether, considering my own results in combination with these figures, the safest verdict seems to be that the charge against consanguineous marriages on this head is not proven.

In a short criticism of my paper in the "Spectator," it was objected that the women of a family keep up intercourse much more than the men; this reminds me of the old jingle:—

> "Your son is your son until he's a wife,
> Your daughter's your daughter all her life."

And there is probably some truth in the criticism. Now from this cause different name first cousin marriages should be slightly more frequent than they otherwise would be. On the other hand, the mere identity of surnames between two families doubtless tends to keep them together.

But granting the soundness of the objection, the only effect is, that I have under-estimated the extent of first cousin marriage, and it is so much the harder for those, who hold extreme views as to the ills of these marriages, to prove their case.

The "Spectator," however, takes no notice of the fact that my indirect method, partly indirect method, and purely statistical method, all point to approximately the same result.

Mr. Huth says: "We have absolutely no basis from which to "start a statistical inquiry as to the effect of consanguineous "marriage on the offspring." If this is the case, the value of my own imperfect estimate is enhanced.

ADDRESS *of the* PRESIDENT *of* SECTION F (ECONOMIC SCIENCE *and* STATISTICS) *of the* BRITISH ASSOCIATION *for the* ADVANCEMENT *of* SCIENCE, *at the* FORTY-FIFTH MEETING, *which was held at* BRISTOL, *August*, 1875. *By* JAMES HEYWOOD, M.A., F.R.S., F.G.S., *President of the Statistical Society.*

HAVING had the advantage of a school education in Bristol, I have noticed with interest, in subsequent years, the gradual development of this great city, and of its populous neighbour, Clifton; and I trust that the second visit of the British Association will be productive of benefit to your important district.

Railway communication, free trade, and the reduction of dock-dues have aided in increasing the commerce of this locality. Additional facilities for ocean steam-traffic will be afforded by the new docks, almost completed, at the mouth of the River Avon; and fresh storage-room for timber, both by land and water, may also be expected in the same vicinity.

As an example of the utility of a free port, it may be mentioned that large supplies of grain arrive here in screw iron ships from the Black Sea and the Mediterranean. For barley, used for grinding, Bristol has now become the first provincial market in the empire. The imports of Messrs. Wait and James amounted, in 1874, to between 400,000 and 500,000 quarters of corn; and in one year (1874-75) 8,496,000 bushels of grain were landed in Bristol from foreign ports. The portion of England which may be supplied with grain from Bristol as a centre, extends in some directions for 100 miles.

Sugar-refining forms one of the ancient branches of industry both in Bristol and elsewhere; its extent may be appreciated from the establishment of Messrs. Finzel in this city, where 1,200 tons of refined sugar can be turned out in a week.

French fiscal arrangements, however, are not favourable at the present time to the augmentation of British sugar refineries; and the subject merits the attention of Members of the Economic Section.

Part of the French revenue is derived from taxes on spirits, salt, and sugar consumed in France. The duty levied in France on sugar, according to the "Times" of the 28th July, 1875, when the sugar is sold for home consumption, equals in amount the value of the sugar.

A sugar is prepared by the French beet-root sugar-makers, looking as if it only contained 80 per cent. of saccharine matter in a given bulk or weight, whilst the sugar really contains 90 per cent. of saccharine matter. The raw sugar is assessed at a quality 10 per cent. below the real standard; and the French sugar-refiner is debited with a duty according to that assessment, and which is not paid.

When the sugar is exported, the actual quality of the sugar is taken, the drawback is set against the duty, and the refiner is paid the duty thus shown to be due to him.

A memorial issued by London sugar-refiners shows that in 1873 the quantity really produced—

	Kilos.
Of French refined sugar (was at least)	174,859,000
And the "legal" equivalent of the refined sugar exported was	153,185,000
Giving an excess over the "legal" quantity of	21,674,000
Or about 413,000 cwts.	

In 1874 the excess over the "legal" equivalent of the refined sugar rose to 25,413,000 kilos., or about 498,000 cwts.

	Frs.
In 1873 the duty on that excess was	15,891,000
And in 1874	18,636,000
Showing an increase of	2,745,000
Or about 110,000*l.* sterling.	

If to this duty on excess, or bounty, amounting in 1874 to 18,636,000 frs. per annum, be added the bounty derived from other sources, such as the "détaxe" on "poudres blanches," the total amount of bounty will be easily raised beyond 20,000,000 francs for sugar.

In round numbers and in English money 18,000,000 frs. are equal to 720,000*l.*, paid by the French tax-payer to the French sugar-refiner, and with this result: the French sugar-refiner can sell refined sugar in a foreign market, such as England, below cost price.

From the "Statistical Abstract" it appears that the import of—

	Cwts.
Foreign refined sugar and sugar-candy into Great Britain in 1871 was	1,460,102
And that it had increased, in 1874, to	2,717,406

The cheapness of refined sugar in Great Britain has augmented the average of consumption from 1 lb. a-head in 1860 to 8½ lbs. a-head in 1874.

Great Britain possesses commercial friends in France among the vine-growers of Bordeaux and Champagne, and the silk-manufacturers of Lyons. These great industries derive no profit either from a heavy tax on sugar consumed in France, or from a bounty enabling a French sugar-refiner to sell sugar in England below cost price. The occasion seems favourable for a remonstrance with the French Government, and for a conference with leading French statesmen connected with interests independent of beet-root sugar.

Beet-root grows admirably in England; and the British sugar-refiner may consider the question of extending in this country a valuable product of home agriculture.

To conduct a negotiation with France, a knowledge of the French language will be requisite for the Commissioners, whether appointed by private individuals or by the British Government.

It is gratifying to notice that in a recent revision of Bristol charities under the Endowed Schools' Commission, French has a place among educational requirements. Thus, in Queen Elizabeth's Hospital, now a boarding school for 150 boys, after the entrance examination, which comprises reading, easy narrative, writing text-hand, and the first two rules of arithmetic, a scheme of school instruction is given, containing history and geography, as well as English grammar, composition, and literature, the elements of mathematics and natural science, the elements of French or Latin, or both, drawing, and class-singing.

A similar entrance examination is arranged for admission into the Red Maids' Boarding school for eighty girls, in Bristol, the income of which amounts to 4,378*l.* a-year. In this School, instruction is given to girls in history and geography, English grammar, composition, and literature, the elements of mathematics and natural science, and of French or Latin, or both, drawing and class singing, demestic economy, and the laws of health, needlework, and (if the governors think fit) telegraphy, or some other branch of science having a bearing on skilled industry suitable for women.

The examination for admission to the grammar school is to be graduated according to the age of the candidate, and is never to fall below the following standard—that is to say, reading, writing from dictation, the first two rules of arithmetic, and the outlines of the geography of England.

The subjects of secular instruction in the grammar school are to be as follows:—the Latin and Greek languages and literatures; the English language and literature; arithmetic and mathematics; history and geography; natural science and, in particular, applied mechanics, chemistry, and experimental physics; French and German; drawing; class singing.

An annual income of 1,793*l.* belongs to the Bristol Grammar School; and to this institution, as well as to Queen Elizabeth's Hospital and the Red Maids' School (all three being under the Bristol Municipal Charity Trustees), an augmentation has been arranged from various non-educational charities converted into educational endowments, of a capital sum of 14,500*l.*

New buildings for 400 scholars are to erected for the grammar school, including a day and boarding school.

Colston's Hospital is a boarding school for 100 boys, into which no boy is to be admitted under the age of 10 years; and the scholars are not to remain after they are 15 years of age. The examination for the admission of paying scholars comprises reading easy narrative, writing text hand, and easy sums in the first two rules of arithmetic, and the multiplication table. The Governors may raise the minimum standard from time to time if they deem it advantageous for the school to do so.

The subjects of secular instruction in Colston's boarding school are arranged as follows:—reading and spelling, writing, arithmetic, and elementary mathematics; English grammar, composition, and literature; French or Latin, or both; the outlines of history; geography, political and physical; natural science; drawing and vocal music.

There will be two classes of scholars, foundationers and paying scholars. The foundationers in the boarding school must have attended an elementary school regularly for a year preceding their application. They will be elected in order of merit, as tested in competitive examination for boys between 10 and 11 years of age in the subjects of Standard IV (Code 1875), as follows:—

> "To read with intelligence a few lines of poetry selected by the Inspector, and to recite from memory fifty lines of poetry.
>
> "To write eight lines slowly dictated once from a reading book, and to show copy books in improved small hand.
>
> "Compound rules of arithmetic (common weights and measures)."

A note is appended to the table of standards of examination in the new code of regulations, according to the "Minute of the "Committee of Council on Education," 5th April, 1875, respecting the 4th Standard, that the "weights and measures" taught in public elementary schools should be avoirdupois weight, long measure, liquid measures, time table, square and cubical measures, and any measure connected with the industrial occupation of the district.

Bristol, from its geographical position, seems especially adapted for trade with the western part of the continent of Europe, where the metric system of weights and measures is now universally in use. Through various treaties of commerce British trade is rapidly increasing with countries employing that simple and easy mode of calculating measures and weights; and as a permissive Act of Parliament of 1864 sanctions the metric system in Great Britain and Ireland, it may be expedient for the Governors of Colston's Boarding School to consider if some knowledge of the tables of metric weights and measures may not be desirable for the foundationers of that venerable institution.

The competitive examination in Colston's boarding school is arranged in the subjects of Standard V of the Educational Code for boys between 11 and 12 years of age, as follows:—

> "Improved reading; and recitation of not less than seventy-five lines of poetry.
>
> "Writing from memory the substance of a short story read out twice. Spelling, grammar, and handwriting to be considered.
>
> "Practice, bills of parcels, and simple proportion."

The examination for admission to Colston's Girls' School is not to fall below the minimum standard for admission to Colston's Hospital.

The subjects of secular instruction are to be as follows:—Reading and spelling, writing, arithmetic or elementary mathematics; English grammar, composition, and literature; French or Latin, or both; the outlines of history; geography, political and physical; drawing and vocal music; household management; the laws of health; and needlework.

Besides the endowed schools of Bristol, Clifton College, in the immediate neighbourhood, founded in 1851, comprises 500 boys, in addition to whom there are 45 boys in the preparatory school of that college.

As soon as the boys of Clifton College reach the fifth form, they can enter either on the classic or modern side; but those who are not in the college are required to pass a preliminary examination.

In Clifton College instruction is given to boys intended for the Royal Military Academy, Woolwich, or the Indian Civil Engineering College, Cooper's Hill, or the profession of Civil Engineering; and a system of education is carried on suitable for students intended for either Oxford or Cambridge.

The Cathedral of Bristol assists in the establishment of a training college for the education of superior teachers; and for this institution the Ecclesiastical Commissioners provide a capital sum of 12,000*l.*

An entrance examination is arranged for admission into the Training College, comprising English grammar and composition, arithmetic, geography, and English history. Afterwards another examination is held, in which each candidate is expected to pass in at least two of the following subjects:—

Divinity, English literature, Latin, one modern language, mathematics, and one branch of natural science.

No student is to be admitted until he has attained the age of 17 years.

Candidates may, if the Governors think fit, be admitted into the College without passing the examination for admission, if they are graduates of any university in the United Kingdom, or if they have passed the senior local examination of either of the Universities of Oxford or Cambridge, or the matriculation examination of the University of London, or if they are holders of any scholarship or exhibition which may be deemed by the governors an adequate qualification.

The course of general instruction in the Training College has for its main object to illustrate methods of teaching, and the science and history of education, and to qualify the students to become skilled teachers in higher schools. The course includes—

Lectures on the art of teaching;
Model lessons given to classes of scholars in the presence of students;
Lessons, from time to time, given by students to classes of scholars in the presence of the principal or an assistant teacher, and under his tuition.

Once in every year there is an examination of the students by an examiner, or examiners, appointed for that purpose by the governors, and paid by them, but otherwise unconnected with the College. The examiners report in writing to the governors on the proficiency of the students, as shown by the result of the examination, and on the ability which the students evince in giving lessons to classes, and in the discipline and management of a school. The governors are to communicate the report to the principal of the college.

Entrance fees and tuition fees are determined by the Governors of the College, the rate for the tuition fees being not less than 20*l.* a-year.

The principal is to receive a stipend of 200*l.* per annum.

Near the top of Park Street, in this city, is the Bristol Museum and Library, the Council of which, in 1873, agreed with the Faculty of the Bristol Medical School to issue a circular setting forth the advantages of a technical college of science in Bristol for the west of England and South Wales. The Committee formed on this subject received a communication at an early period from the master of Balliol College, Oxford, suggesting the co-operation of his own college, and probably that of another Oxford college in the undertaking.

A promise on the part of Balliol College and New College, Oxford, was afterwards given, to assist in the establishment and support of the proposed college by means of a yearly contribution of 300*l.* each for a period of not less than five years, on condition of each Oxford college being represented on the governing body of the new institution, of the instruction given being literary as well as scientific, and of the requirements of adult education being specially considered. It was also provided that, so far as could be arranged, the instruction, other than that of the medical classes, should be open to women, and that lectures should be given on general subjects. A ready assent to these conditions was accorded by the committee who had taken charge of the negotiation.

In June, 1874, the Mayor of Bristol presided at a public meeting in Clifton, for the college. A scheme of constitution was prepared, and in 1875 a conference in favour of the college took place in one of the rooms of the Parliamentary palace in Westminster, attended by influential members of both Houses of Parliament.

It may be of some value to friends of the Bristol College to hear some particulars of the development of Owens College, Manchester, in which I assisted as one of the original trustees of that seat of learning. At its origin the trustees were satisfied to commence the college in a house with spacious apartments, to which was attached a gymnasium as an exercise-ground for the students.

Chemistry and the English language are now especially attractive subjects in Owens College. Elementary history, Latin, mathematics, and mechanics, with jurisprudence and physiology, also command much attention among the students.

Each candidate for admission into Owens College usually produces a testimonial of good character from his last instructor. No person is admitted under the age of 14 years; and those who are under 16 are required to pass a preliminary examination in English, arithmetic, and the elements of Latin.

Periodical examinations are held in each class, and written exercises are given out. Neglect of these tests of progress disqualifies a student from competing for prizes and honours at the end of the session, when a general examination takes place of all the students. No certificate of attendance on the class is granted to a student who absents himself, without a sufficient reason, from the general examination.

Mr. Greenwood, principal of Owens College, reported in June, 1874, that there were in that year 356 students in the college, of whom 37 were under 16 years of age, 117 between 16 and 18, 75 between 18 and 20, and 127 above 20. There were 141 medical students and 847 evening students. The total number was 1,344 students.

Owens College is affiliated to the University of London; and Greek is no longer compulsory in that University on candidates at the matriculation examination, but is ranked at that time as an optional subject, with French and German. Latin is compulsory at matriculation; and a student is required also to pass in any two of the three following languages—Greek, French, and German. The remaining subjects for matriculation comprise mathematics, natural philosophy, chemistry, and English language and history.

It is recommended in Owens College, that if a student elects to take up Greek, and either French or German for matriculation, he should enter for the first year's arts course, taking chemistry and one of the modern languages; and that those students who propose to take up both French and German for matriculation should enter for the first year's science course, taking Latin and both the modern languages of France and Germany.

In June, 1873, at the matriculation examination of the University of London, 32 students of Owens College passed; and 3 students passed in January, 1874. Of these 35 students, 7 were evening students.

Students formerly at Owens College have obtained at Oxford a Stowell Civil-Law Fellowship, at University College, a Burdett-Coutts Scholarship in Geology, a Fellowship at Pembroke College, and a Senior Mathematical University Scholarship, also an Exhibition and a Scholarship at Exeter College in natural science, and a Studentship in natural science at Christ Church.

At Cambridge an Owens College student has been rewarded by attaining the place of eighteenth wrangler in the Mathematical Tripos of 1874; and other Owens College students have been elected to scholarships at Trinity College, St. John's College, and Sidney-Sussex College, and to a Sizarship at St. John's College.

Two Whitworth Scholarships have been gained by Owens College students.

In twenty-one years, from 1853 to 1874, there have been 234 Owens College students matriculated in the University of London, and 225 have successfully presented themselves at higher examinations of that University. During the three years 1871-74 71 have matriculated, and 75 have passed the further examinations of the same University. Principal Greenwood observes that of the Owens College students a large body do not comtemplate graduation either in London or elsewhere, and are yet in every sense devoted to academic work.

Prizes and scholarships are awarded to students in the Medical department of Owens College; and the names of those who pass in universities and professional colleges are duly recorded in the Owens College "Calendar."

A college for higher education at Bristol has a right to gather round it an ever-increasing number of students, and to give an importance to its own certificates and rewards, which will soon be appreciated as nearly equivalent to degrees in universities.

Girton College, three miles from Cambridge, affords an instance of lady students succeeding in the same academical examinations to which Cambridge University gentlemen students are admitted. The Cambridge Examiners have kindly allowed marks to the papers of the lady candidates; and one lady student from Girton has recently obtained a few more marks than the highest gentleman student in the examination for the "pol.," or ordinary B.A. degree, at Cambridge.

Ladies who are ambitious of obtaining literary and scientific distinctions, seem to wish to enter the same examinations for which there are gentlemen candidates; and several lady students of Girton College have obtained places corresponding to that of Senior Optime in the Cambridge Mathematical Tripos, and of the second class in the Cambridge Classical Tripos.

The Middle-Class School in Cowper Street, London, under Dr. Wormell, has a high range of mathematical instruction; and the boys are encouraged to construct their own apparatus from simple materials, and to employ themselves in workshops recently added to the school. The English language and English history are admirably taught in that institution. The senior boys of the sixth form show a creditable knowledge of the elements of constitutional law and of political economy.

Ireland has of late years increased in prosperity from the more ready transfer of landed property in that island. The Irish Commissioners, under the Incumbered Estates Act, commenced their sittings in 1849; and in 1868 an Act was passed extending the powers of the Incumbered Estates Court, for the sale of incumbered properties to properties that are unincumbered. A perpetual jurisdiction was granted to the new tribunal, under the name of the "Landed Estates Court." In 1873 the amount of purchase money for land under this Court was 1,737,222*l.*, the net rental of the land sold was 86,685*l.*, and there were 208 sales.

All Irish estates, whether incumbered or not, can be sold, or contracted for, or disposed of, through the medium of the court, which is also judicially empowered to declare a title to property, and, by later acts, to sell or lease settled estates. Small purchasers of land would be benefited by a greater simplification of procedure, and a reduction of expense in the professional charges, which are fixed on a high scale. For instance, parties interested in the purchase of a farm worth 500*l.* may be required, as a minimum expense, to pay nearly 100*l.* in effecting the purchase.

Having visited the Landed Estates Register Office in Boston, Massachusetts, I can report favourably of the excellent plan of recording transfers of landed property in the New England States of North America. A book is kept, in which the description of each estate is preserved, and the mortgages and other claims on the land are entered. If a sale is intended, the person proposing to purchase may at once see the incumbrances on the property, as well as many particulars of importance respecting the value of the estate. The transfer of property after the sale is duly registered; and the new proprietor thus obtains his title to the land.

Next year (1876) a meeting of the International Statistical Congress to be held in Buda-Pesth, the capital of Hungary. Official statistical representatives of all the principal governments of Europe, and of the United States of America, attend the Congress, which also includes delegates from statistical societies of different countries: it usually meets once every two years.

When the Congress assembled at Berlin in 1863 (under the presidency of Count von Eulenberg, Secretary of State for the Home Department in Germany), the statistical representatives of Great Britain comprised:—Dr. Farr, F.R.S., Superintendent of Statistics in the General Register Office; Mr. Valpy, Chief of the Statistical Department and Corn Returns in the Board of Trade; Mr. Hammick, Secretary of the General Register Office, and others.

On the 9th September, 1863, Mr. Valpy presented to the Congress the annual statement and the accounts of the trade and navigation of the United Kingdom of Great Britain and Ireland, and remarked that the International Congress was certainly doing good service to all nations. " The periodical meetings," observed Mr. Valpy, " which we are invited to hold in the capital cities, " where the members are received with such royal and general " kindness, must exercise a great and favourable influence upon " public opinion in regard to national statistics. The opportunity " afforded by the Congress for the meeting of public officers and " gentlemen interested in statistics from so many countries is productive of much advantage. The circle of our friends is enlarged; " and, speaking as an official delegate, I can say that our means of " usefulness at home are increased, and our efforts of improvement " are much encouraged, by the cordial personal intercourse between " the members of the Congress."

Dr. Farr, at the meeting in Berlin, eulogised the address of His Royal Highness the late Prince Consort, who had presided at the opening of the International Statistical Congress in London. Dr. Farr mentioned that the labours of the Congress had been described in that inaugural address " as connected with the loftiest "principles of philosophy, and directed to the noblest end—the "good of the people of all nations."

Mr. Hammick thanked Dr. Engel, the Director of the Statistical Department in Berlin, for his able abridgment of the resolutions and works of the International Statistical Congress at its previous meetings.

The meeting at Buda-Pesth may have a special interest, as the Convention of Commerce between Great Britain and the Austro-Hungarian empire is liable to terminate on the 1st January, 1877, and commercial treaties with various other European States may also come under consideration, for modification or renewal, at the same time.

A valuable work on commercial treaties was published by Mr. Hertslet (formerly at the Foreign Office); and his son, Mr. Edward Hertslet, C.B., Librarian and Keeper of the Papers at the Foreign Office, has recently prepared a collection of treaties, in one thin volume, showing how the trade between this country and Austria is regulated in the present year (1875).

Mr. E. Hertslet mentions the desire publicly expressed by Austria, Turkey, and other foreign powers to revise their commercial treaties not only with Great Britain, but with other States. He shows precisely in his treaties' collection what commercial treaties have been concluded between foreign States, containing clauses conferring more favourable treatment on their respective subjects, on commerce, and on navigation, than are specially provided for in the English treaties, but the benefits of which concessions are or might be enjoyed by British subjects under the "most favoured nation" clauses of the English treaties.

If the commercial treaties between different countries are likely to be considered at the Buda-Pesth International Statistical Congress, a calm and dispassionate survey of international commercial relations may be anticipated on the part of an assembly comprising official representatives of high statistical talent from nearly all civilised nations.

The Council of the Statistical Society of London nominates a small number of delegates to attend each Congress; and the Committee of Section F may perhaps arrange for some representation of the Section of Economic Science and Statistics in the Buda-Pesth Meeting of 1876.

In another department of statistical research, education, the General Committee of the British Association formerly voted grants, which materially aided educational inquiries. In 1836 the Report of a Committee of the Manchester Statistical Society (consisting of Messrs. W. R. Greg, W. Langton, and Henry Romilly), on the state of education in the borough of Liverpool, was presented to

Section F at Bristol. The investigation had occupied thirty-one weeks, at a cost to the Society of 96*l.* On the recommendation of the Sectional Committee in Bristol the sum of 150*l.* was placed at the disposal of a Committee (consisting of Colonel Sykes, afterwards M.P. for Aberdeen, Mr. Hallam, and Mr. Porter, Secretary of the Board of Trade) in furtherance of inquiries into the actual state of schools in England, considered merely as to numerical analysis; and similar grants were bestowed, with a like object, for several years in this Association.

Last year, at Belfast, some of the leading members of the Statistical Section interested themselves in the restoration of harmony between the masters and the operatives in a strike which was going on at the time of the British Association Meeting. A conference was recommended, happily followed by a compromise, and the differences were satisfactorily arranged.

At the present Meeting, the Section of Economic Science has various communications of much interest to be brought forward; and it gives me pleasure to request the reading of the first paper, thanking you, at the same time, for your courtesy in listening to my introductory observations.

MISCELLANEA.

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I.—*Pauperism and the Expense of Relief.*

The Local Government Board have published the following tables for all England and for the Metropolis alone. They embrace the latest information for completed parochial years:—

Table 1.—*As to Pauperism. All England.*

Population—Census 1851, 17,927,609; 1861, 20,066,224; 1871, 22,706,031.

Years ended with Lady-day.	Average Number of Paupers.*		
	In-door.	Out-door.	Total.
1858....................	122,613	786,263	908,886
'59....................	121,232	744,214	865,446
'60....................	113,507	731,126	844,633
1861....................	125,866	758,055	883,921
'62....................	132,236	784,906	917,142
'63....................	136,907	942,475	1,079,382
'64....................	133,761	881,217	1,014,978
'65....................	131,313	820,586	951,899
1866....................	132,776	783,376	916,152
'67....................	137,310	794,236	931,546
'68....................	150,040	842,600	992,640
'69....................	157,740	860,400	1,018,140
'70....................	156,800	876,000	1,032,800
1871....................	156,430	880,930	1,037,360
'72....................	149,200	828,000	977,200
'73....................	144,338	739,350	883,688
'74....................	143,707	683,739	827,446
'75....................	146,800	654,114	800,914

* The average of pauperism is taken upon the returns of the persons who were actually in receipt of relief on the 1st July and 1st January in each parochial year.

TABLE 2.—*As to Poor Rate Expenditure. All England.*

Years ended with Lady-day.	Total Expenditure from Poor Rates and from Sums Received in Aid of Rates.	Whereof was Expended for				
		Relief of the Poor only.	County, Borough, and Police Rates.	Highway Rates, 27 and 28 Vict., Cap. 101, Sec. 33.	Other* Purposes Unconnected with Relief.	Other† Purposes partly Connected and partly Unconnected with Relief.
	£	£	£	£	£	£
1858	8,449,658	5,878,542	1,916,273	—	188,248	466,595
'59	8,149,455	5,558,689	1,915,255	—	191,273	484,238
'60	8,075,904	5,454,964	1,936,549	—	190,232	494,159
1861	8,395,212	5,778,943	1,925,210	—	193,198	497,861
'62	8,806,074	6,077,525	2,026,916	—	191,291	509,945
'63	9,325,072	6,527,036	2,075,468	—	194,651	527,917
'64	9,680,480	6,423,381	2,163,290	—	214,717	879,092
'65	9,792,158	6,264,966	2,133,290	550,976	214,188	628,738
1866	9,989,120	6,439,517	2,209,184	578,494	209,964	551,961
'67	10,905,173	6,959,840	2,511,511	595,699	196,823	641,300
'68	11,380,593	7,498,059	2,456,578	614,893	200,293	610,770
'69	11,773,999	7,673,100	2,564,735	658,469	255,149	622,546
'70	11,737,613	7,644,307	2,587,896	652,591	253,011	599,808
1871	12,092,741	7,886,724	2,708,840	648,846	259,115	589,216
'72	12,381,278	8,007,403	2,798,344	658,489	302,633	614,409
'73	12,426,566	7,692,169	3,041,808	704,483	348,492	639,614
'74	12,851,007	7,664,957	3,310,416	777,141	480,585	617,908

* "Other purposes unconnected with relief" consist of the following items:—Constables' expenses and cost of proceedings before justices (up to 1872); payments on account of Registration Act; vaccination expenses, and charges allowed in respect of parliamentary and municipal registration; and costs of jury lists.

† "Other purposes partly connected and partly unconnected with relief," as given in this return, consist of law charges, parochial and union; payments under Assessment Committee Acts; the salaries and poundage of collectors and assistant overseers; and a variety of miscellaneous disbursements, coming under no specified heading in the annual poor rate returns. Constables' expenses and cost of proceedings before justices have, since 1872 inclusive, been placed in this column.

TABLE 3.—*As to Pauperism. The Metropolis only.*

Population—Census 1851, 2,362,236; 1861, 2,803,989: 1871, 3,254,260.

Years ended with Lady-day.	Average Number of Paupers.*		
	In-door.	Out-door.	Total.
1858†	20,525	52,378	72,903
'59†	19,305	49,521	68,826
'60†	24,698	60,670	85,368
1861†	26,351	66,488	92,839
'62	28,943	67,715	96,658
'63	29,641	70,159	99,800
'64	29,574	69,537	99,111
'65	29,567	70,415	99,982
1866	31,589	72,910	104,499
'67	33,070	89,384	122,454
'68	35,964	108,672	144,636
'69	36,697	110,133	146,830
'70	36,441	114,386	150,827
1871	36,739	116,554	153,293
'72	38,379	97,323	135,702
'73	38,063	80,904	118,967
'74	39,164	75,845	115,009
'75	39,882	69,437	109,319

* See note on Table 1.

† A portion only of the metropolis was represented in the ordinary returns of pauperism for 1858-61. The population of the places returned was about 1,600,000. Since 1861 the whole of the metropolitan pauperism has been given in the official tables for 1st July and 1st January.

TABLE 4.—*As to Poor Rate Expenditure. The Metropolis only.*

Years ended with Lady-day.	Total Expenditure from Poor Rates and from Sums Received in Aid of Rates.	Whereof was Expended for				
		Relief of the Poor only.	County, Borough, and Police Rates.	Highway Rates, 27 and 28 Vict., Cap. 101, Sec. 33.	Other* Purposes Unconnected with Relief.	Other† Purposes partly Connected and partly Unconnected with Relief.
	£	£	£	£	£	£
1858	1,379,120	862,261	384,866	—	21,145	110,848
'59	1,354,711	814,646	405,829	—	21,958	112,279
'60	1,358,561	796,423	417,455	—	22,884	121,799
1861	1,392,884	832,155	425,495	—	23,750	111,484
'62	1,450,563	872,070	447,963	—	22,221	108,309
'63	1,466,997	868,198	468,471	—	23,141	107,187
'64	1,489,732	876,290	472,755	—	30,203	110,484
'65	1,512,265	905,640	472,832	246	24,204	109,343
1866	1,611,055	976,262	495,269	283	23,988	115,253
'67	1,844,765	1,175,363	504,728	159	25,850	138,665
'68	2,046,466	1,316,759	559,632	412	26,359	143,304
'69	2,202,031	1,415,233	603,284	273	31,025	152,216
'70	2,280,905	1,465,874	657,349	178	30,686	126,818
1871	2,457,966	1,646,103	662,808	158	34,910	113,987
'72	2,593,858	1,756,929	672,025	135	39,134	125,635
'73	2,518,958	1,630,886	728,777	175	35,761	123,359
'74	2,497,636	1,633,182	713,117	275	36,289	114,773

* See note on Table 2. † See note on Table 2.

II.—*A Table showing the Number of Vessels, British and Foreign, Posted on* "Lloyd's Loss *British Registered Vessels from* 1857 *to* 1869 *inclusive; and, subsequently the Percentage Sailing Vessels and Steamers of Various Nations of the World as given in the* "Universal

	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.	Ships and Steamrs.
January............	524	278	416	501	350	373	401	344	330	580	583
February	258	267	256	301	546	242	250	315	255	286	196
March	328	302	285	288	294	362	302	266	215	367	313
First quarter....	1,110	847	957	1,090	1,190	977	953	925	800	1,233	1,092
April	260	262	292	182	190	237	234	201	180	228	220
May	153	190	168	284	198	198	218	179	110	168	171
June	174	140	171	214	178	193	170	140	181	127	148
Second quarter	587	592	631	680	566	628	622	520	471	523	539
First half-year	1,697	1,439	1,588	1,770	1,756	1,605	1,575	1,445	1,271	1,756	1,631
July	150	209	132	146	177	197	210	143	130	144	166
August	230	165	209	184	206	183	184	202	146	181	129
September........	238	208	266	225	272	190	302	218	170	218	158
Third quarter	618	582	607	555	655	570	696	563	446	543	453
October	348	310	548	536	254	518	346	343	390	238	302
November	256	434	567	356	608	402	564	583	434	418	433
December	299	406	448	322	399	557	725	364	306	415	544
Fourth quarter	903	1,150	1,563	1,214	1,261	1,477	1,635	1,290	1,130	1,071	1,279
Second half-yr.	1,521	1,732	2,170	1,769	1,916	2,047	2,331	1,853	1,576	1,614	1,732
Annual total....	3,218	3,171	3,758	3,539	3,672	3,652	3,906	3,298	2,847	3,370	3,363
Total registered sailing and steam vessels of United Kingdom *	27,097	27,541	27,702	27,663	28,038	28,440	28,637	28,632	28,787	28,971	28,773
Percentage of vessels posted on total British registered vessels	11·88	11·51	13·57	12·79	13·10	12·84	13·64	11·52	9·89	11·63	11·69

Note.—The increase in the percentage of losses posted, upon the number of vessels from 1870 onwards, is most marked, especially when the increase in size and value lately occurring is remembered, the slight reduction in 1874 as compared with 1873 may probably arise from the increase in the number of foreign vessels in relation to which it is possible that the proportion of casualty to number may not be so heavy as with British vessels. Casualties are posted on "Lloyd's Loss Book" as follows: "1. Vessels Ashore, Burnt, Sunk, or Abandoned, including "BRITISH Coasters. 2. Vessels Ashore, Got Off much Damaged. 3. Vessels with Loss of any "one Principal Mast. 4. Vessels Condemned, *whether* reported before as a casualty or not." As numerous minor casualties constantly occur which do *not* go on the "Loss Book," it would probably be near the truth to accept the figures as (practically) relating to total losses.

* From "Statistical Abstract of the United Kingdom," presented to Parliament.

Book,"* *for Eighteen Years, from* 1857 *to* 1874 *inclusive; with the Percentage upon Total of Sailing Vessels and Steamers respectively so Posted, upon the Mercantile Sea-going* Mercantile List" *issued by the Bureau Veritas. Compiled by* HENRY JEULA, F.S.S., F.R.G.S.

1868.	1869.	1870.		1871.		1872.		1873.		1874.		Monthly Percentage on Total of both Ships and Steamers for Ten Years ending 1874 inclusive.
Ships and Steamrs	Ships and Steamrs	Ships.	Steamrs.	Ships.	Steamrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	
383	252	253	18	338	33	267	24	301	32	234	31	12·34
260	267	252	15	285	24	168	19	340	31	253	22	8·33
199	293	203	17	241	14	214	20	256	33	254	31	9·01
842	812	708	50	864	71	649	63	897	96	741	84	29·68
194	145	165	10	151	11	188	17	156	23	226	32	6·58
142	175	158	10	125	22	176	16	164	33	122	23	5·43
116	131	123	11	126	17	110	26	135	24	112	11	4·72
452	451	446	31	402	50	474	59	455	80	460	66	16·73
1,294	1,263	1,154	81	1,266	121	1,123	122	1,352	176	1,201	150	46·41
101	108	128	13	146	17	143	17	147	21	83	24	4·69
212	143	158	12	188	21	116	25	234	26	134	25	5·90
229	312	226	12	270	17	196	25	207	29	190	22	7·69
542	563	512	37	604	55	455	67	588	76	407	71	18·28
243	378	396	36	282	18	304	34	273	36	419	41	11·43
324	390	260	24	284	17	642	40	307	31	303	42	13·32
398	392	322	29	332	42	513	52	271	44	426	49	10·56
965	1,160	978	89	898	77	1,459	126	851	111	1,148	132	35·31
1,507	1,723	1,490	126	1,502	132	1,914	193	1,439	187	1,555	203	53·59
2,801	2,986	2,644	207	2,768	253	3,037	315	2,791	363	2,756	353	100·00
28,444	27,159	23,189	3,178	22,510	3,382	22,103	3,673	21,698	3,863	21,464	4,033	—
9·85	10·99	11·40	6·51	12·30	7·48	13·74	8·58	12·86	9·40	12·84	8·75	—

	1870.	1871 and 1872.	1873.	1874.
In the "Universal Mercantile List," issued by the "Bureau "Veritas" in the years 1870, 1873, and 1874, the number of sea-going merchant vessels of various nations of the world at the respective periods was given as under—†				
Sailing vessels	59,518	No information available	56,281	56,289
Steamers	4,132		5,148	5,365
The percentage of vessels posted on "Lloyd's Loss "Book" would be thereon as under—				
Sailing vessels	4·44		4·96	4·90
Steamers	5·01		7·05	6·58

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* *Missing Vessels* are *not* so Posted. † See "The Mercantile Navies of the World in the Years 1870 and 1874 Compared."—*Journal of the Statistical Society*, March, 1875, p. 79.

As "Missing Vessels" are *not* posted on "Lloyd's Loss Book," and consequently do not appear in the foregoing table, it may be interesting to note the difference such vessels, when included, make in the percentages of loss. This is shown in the following table, for the years 1870 to 1874, inclusive.

Table showing Percentage of Loss including Missing Vessels.

SAILING VESSELS.

	1870.			1871.		
	Number.	Percentage of Loss upon Total of		Number.	Percentage of Loss upon Total of	
		British Registered Sailing Vessels.	Mercantile Sea-going Sailing Vessels of the World.		British Registered Sailing Vessels.	Mercantile Sea-going Sailing Vessels of the World.
Missing	81	0·35	0·14	68	0·30	No information available.
Posted on "Lloyd's Loss Book"	2,644	11·40	4·44	2,768	12·30	
Total	2,725	11·75	4·58	2,836	12·60	—

	1872.			1873.			1874.		
	Number.	Percentage of Loss upon Total of		Number.	Percentage of Loss upon Total of		Number.	Percentage of Loss upon Total of	
		British Registered Sailing Vessels.	Mercantile Sea-going Sailing Vessels of the World.		British Registered Sailing Vessels.	Mercantile Sea-going Sailing Vessels of the World.		British Registered Sailing Vessels.	Mercantile Sea-going Sailing Vessels of the World.
Missing	80	0·36	No information available	148	0·69	0·26	111	0·52	0·20
Posted on "Lloyd's Loss Book"	3,037	13·74		2,791	12·86	4·96	2,756	12·84	4·90
Total	3,117	14·10	—	2,939	13·55	5·22	2,867	13·36	5·10

STEAMERS.

	1870.			1871.		
	Number.	Percentage of Loss upon Total of		Number.	Percentage of Loss upon Total of	
		British Registered Steamers.	Mercantile Sea-going Steamers of the World.		British Registered Steamers.	Mercantile Sea-going Steamers of the World.
Missing	7	0·22	0·14	5	0·15	No information available.
Posted on "Lloyd's Loss Book"	207	6·51	5·01	253	7·48	
Total	214	6·73	5·15	258	7·63	—

Table showing Percentage of Loss including Missing Vessels— Contd.

STEAMERS—*Contd.*

	1872.			1873.			1874.		
	Number.	Percentage of Loss upon Total of		Number.	Percentage of Loss upon Total of		Number.	Percentage of Loss upon Total of	
		British Registered Steamers.	Mercantile Sea-going Steamers of the World.		British Registered Steamers.	Mercantile Sea-going Steamers of the World.		British Registered Steamers.	Mercantile Sea-going Steamers of the World.
Missing	9	0·24	No information available	16	0·41	0·31	17	0·42	0·32
Posted on "Lloyd's Loss Book"	315	8·58		363	9·40	7·05	353	8·75	6·58
Total	324	8·82	—	379	9·81	7·36	370	9·17	6·90

III.—*Trade and Condition of Belgium.*

THE series of reports addressed by Sir H. Barron, Secretary of Legation at Brussels, to the Foreign Secretary, upon the commerce and industry of Belgium in former years, and more recently still for the year 1874, furnish together information which indicates very forcibly the growing importance of Belgian commerce, and the prosperous condition of the inhabitants of the country. From a comparative statement for ten years, it appears that the aggregate of the "Commerce special" which in 1864 amounted to 51,184,000*l.*, had gone on successively increasing until in 1873 it had reached the enormous total of 103,252,000*l.* Under this term we are instructed to regard all imports which are declared for home consumption; also all exports, whether native produce or foreign produce, assimilated to native by duties, or if exempt from duty, by having been declared for home consumption. In 1873 the imports, exclusively of merchandise, *i.e.*, without bullion and specie, amounted to 56,909,000*l.*, and the exports in like manner to 46,343,000*l.* The quantities of the principal articles imported in 1874 were as follows:—cereals, 638,937 tons; wool, 50,829 tons; cattle and sheep, 334,728 head; cotton tissues, 1,589,936 kilogs.; iron ore, 744,781 tons; coal and coke, 467,089 tons; and the exports were, iron, wrought, 225,098 tons; wheat and barley, 188,907 tons; cattle, sheep, and swine, 364,335 head; glass, 80,425 tons; coal and coke, 4,461,000 tons. The total value for the year 1874 has not yet been made known, but there will have been probably a slight decrease, as a natural reaction after the exceptional activity of previous years. The aggregate "general commerce," which comprises all imports whether for home consumption or for transit, and all exports passing out of Belgium, whether native or foreign, in fact the whole trade amounted in 1872 to 176,819,000*l.*, a figure only inferior by 3,068,000*l.*, or 2 per cent., to that of the preceding year. The merchandise received into Belgium, *i.e.*, imported for home consumption, for direct transit, or for bond, is included in the above figures for 92,812,000*l.* This shows a decrease of 5 per cent. on the imports of 1871. The "general" export trade—Belgium and foreign produce united—amounted to 84,000,000*l.*, showing an increase of 2 per cent. as compared with 1871. The prosperity which set in after the peace of 1871 became further considerably increased in 1872. Some trades, however, suffered partially from not having been able to command prices commensurate with the enhancement of materials and labour. The working classes found in the great rise of wages ample means of comfort and savings, but their improvidence increased with their prosperity, as is proved by the actual decrease in the savings banks deposits. The year 1874, we are informed, had passed away amidst a general stagnation of trade, particularly of the two great staple trades of Belgium. The fall of coal, inevitable after the extravagant rise of 1873, had almost reached its present limits in the first days of 1874. But the metal, glass, sugar, and building trades, crushed by the preceding coal famine, have fallen into a state of languor from which nothing has yet been able to raise them. The exactions of the labouring class, a legacy of this coal famine, threaten at the present time to cripple every industry.

According to the annual statement of the Board of Trade, 27,880,916*l.* would represent the aggregate value of the traffic passing between Great Britain and Belgium during the year 1872, about the same amount as that recorded for 1871. The discrepancy between this figure and that of 32,471,920*l.* presented in the Belgian returns for the same year is at first sight apparently unaccountable. It is true that the official valuation of merchandise are generally higher in the Belgian than in the English tables. Whichever of the two returns are taken as a basis of comparison, there is no doubt whatever of the sudden vast expansion of this international trade in 1871. That rate of progress was of course not maintained in 1872, but the commercial movement remained stationary at the previous figures of 1871, hitherto quite unheard of. Complaints have been made concerning the anomalous condition of the tariffs between Belgium and Great Britain which continues to tax heavily, if not prohibitively, our principal manufacture. Sir H. Barron says that public opinion in Belgium is quite alive to the advantages of free trade, but is not yet strong enough single-handed to get rid of the remaining vestiges of protection to be found in the cotton tariff.

Amidst the astonishing progress of Belgium commerce its merchant navy continues to dwindle away, till it is now reduced to 59 vessels, measuring 32,346 tons: 33 of these belong to Antwerp, 19 to Ostend, 7 to the ports of Ghent, Brussels, Louvain, and Nieuport. Some active measures were taken in 1862 and 1864 to arrest this process of decay, but hitherto in vain. Of these few vessels only 14 are above 900 tons burthen. The fishing trade, which remains about stationary, employs 263 registered boats, measuring 9,112 tons and 1,571 men. In 1872 the number of vessels engaged in the Belgium trade was 6,134 representing 1,878,106 tons. Of these 2,789 were British, with 1,108,455 tons, and 987 were Belgian, with 114,356 tons.

The condition of the people is shown by the census which was taken on the 31st December, 1866. The three main points of investigation were—1st, the birthplace; 2nd, the degree of instruction; 3rd, the profession, age, and "*état civil*" of each inhabitant, was published in 1870. The third volume, that on industry, has not yet appeared. The population was found to amount to 4,827,833 souls. This was the "*population de droit,*" *i.e.*, the "habitual residents" recorded in the communal registers and in all statistical returns. The *de facto* population, *i.e.*, the persons found actually existing in every commune, is also recorded in the census. The difference is of course considerable in some communes, but the aggregate difference throughout the kingdom between the population "*de droit*" and "*de fait*" was only 1,487, the latter being the more numerous. The number of households was found to be 1,038,898, with an average number of 4·65 inmates in each. The number of inhabited houses was 929,792, therefore little less than the number of households, showing the great difference between Belgium and French habits. The number of the two sexes are about equal, the males preponderating by 11,455. Females enjoy a great advantage in point of longevity; in the rural communes males, and in urban communes females, are the most numerous. The Flemish language alone is spoken by 2,406,491 persons, about one-half of the population; the French language or dialect alone by 2,041,784 persons, and both languages are spoken by 308,361 persons. Of the whole population above 7 years old 42 per cent. cannot read and write. Luxembourg contained the smallest proportion of illiterate persons. The other provinces come in the following order as regards instruction:—Namur, Antwerp, Liege, Brabant, Lunbourg, Hainaut, West and East Flanders. About 43,000 youths of 19 are annually called upon to draw lots for military service, and of these 74 per cent. could read and write.

The decrease in the number of British and the increase in that of German residents are very remarkable. The numbers of English have fallen off considerably in all four communes which are their principal resorts, viz., Brussels, Ixelles, Bruges, and Antwerp. The two provinces of Brabant and West Flanders, which are chiefly selected for residence for English families, have the highest death rate, while Namur has the lowest, being 19 per 1,000. Brussels equals and even surpasses other capitals in its rate of mortality. The population was in 1866 found to be 157,905. The average number of deaths in the five following years was 5,692, equal to 36 per 1,000. The mortality rose in 1871 to the alarming figure of 6,973, or 44 per 1,000, but subsided again in 1873 to 5,273, which on the estimated population of 177,100 in 1871, would amount only to 29 per 1,000. The next three large towns are Antwerp with 141,910, Gand with 128,424, and Liege with 113,774. There are thirteen other communes with populations exceeding 20,000, and forty-six between 10,000 and 20,000. The proportion of illegitimate births is much the same as in France, much higher than in England or Ireland, but much lower than those of Scotland, Mecklenburg, Wurtemburg, and Bavaria. It is to be observed that nearly one-half of these children are generally legitimised on the subsequent marriage of the parents. The demoralising effect of the capital is shown in the returns for Brabant and for Brussels, which rise to 12½ and 26 per cent. respectively. Land, which is already dearer in Belgium than anywhere else, continues to increase in value in every province. There are few if any countries where land will fetch on an average 63*l.* per acre. In East Flanders the average value is set down at 97*l.* per acre, which at the letting price of 2*l.* per acre represents forty-eight and a-half years' purchase. In Brabant and Hainaut land is let at a higher, but sells at a lower price, though still extravagantly dear. Yet few of these soils are the deep black loam constituting wheat land of the best quality. It was found in 1866 that one-half of the agricultural land was farmed by its owners, and the other half by tenant farmers.

IV.—1. *Statement of the Area of Land Owned, Area Occupied, Improved and under Crops, Pasture, Gardens, and Orchards, in each Province of Canada, according to the Census of* 1870-71.

[000's omitted.]

Provinces.	Area of Land Owned.	Area Occupied.	Total Improved.	Under Crop.	Pasture.	Gardens and Orchards.
	Acres.*	Acres.*	Acres.	Acres.	Acres.	Acres.
Ontario	19,605,	16,162,	8,834,	6,587,	2,089,	207,
Quebec	17,702,	11,026,	5,704,	3,714,	1,943,	46,
New Brunswick	5,454,	3,827,	1,171,	779,	385,	7,
Nova Scotia	6,607,	5,031,	1,627,	790,	823,	14,
Total	49,368,	36,046,	17,336,	11,820,	5,240,	274,

* The difference between these two areas represents the wild land belonging to individuals, but not forming part of farm holdings.

2. *Statement of the Number of Occupiers of Land and the Various Sizes of their Holdings in each Province of Canada, according to the Census of* 1870-71.

Provinces.	Total number of Occupiers.	Size of Holdings.				
		10 Acres and Under.	10 to 50 Acres.	50 to 100 Acres.	100 to 200 Acres.	Above 200 Acres.
Ontario	172,258	19,954	38,882	71,864	33,984	7,574
Quebec	118,086	10,510	22,379	44,410	30,891	9,896
New Brunswick	31,202	2,669	6,415	11,888	6,900	3,330
Nova Scotia	46,316	7,148	11,201	13,138	10,401	4,428
Total	367,862	40,281	78,877	141,300	82,176	25,228

3. *Number of Live Stock in each Province of Canada, according to the Census of* 1870-71.

Provinces.	Horses.	Colts and Fillies.	Working Oxen.	Milch Cows.	Other Horned Cattle.	Sheep.	Swine.
Ontario	368,585	120,416	47,941	638,759	716,474	1,514,914	874,664
Quebec	196,339	57,038	48,348	406,542	328,572	1,007,800	371,452
New Brunswick	36,322	8,464	11,132	83,220	69,335	234,418	65,805
Nova Scotia	41,925	7,654	32,214	122,688	119,065	398,377	54,162
Total	643,171	193,572	139,635	1,251,209	1,233,446	3,155,509	1,366,083

Note.—British Columbia and Prince Edward Island were not admitted into union with the Dominion of Canada until after the Census had commenced.

V.—*Grain Producing States.*

The following table shows the estimated production of the chief descriptions of grain and of potatoes, in several of the principal corn-growing countries of the world, according to the latest official returns:—

[000's omitted.]

Foreign Countries and British Possessions.	Date of Returns.	Wheat.	Barley.	Oats.	Rye.	Maize.	Potatoes.
Foreign Countries—		Bshls.	Bshls.	Bshls.	Bshls.	Bshls.	Bshls.
Russia	1870	217,096,	126,507,	582,960,	613,397,	—	319,970,
Sweden	'72	2,403,	12,307,	31,267,	14,667,	—	40,311,
Norway	'70	262,	3,750,	7,981,	849,	—	—
Prussia	'71	77,225,	113,920,	196,006,	150,086,	—	557,631,
Wurtemburg	'73	604,	5,184,	8,966,	1,560,	79,	19,225,
Bavaria	'63	11,733,	16,911,	25,119,	23,858,	47,	66,214,
Holland	'72	5,366,	4,594,	10,516,	10,915,	—	51,532,
Belgium	'66	14,203,	3,666,	23,364,	17,562,	—	33,869,†
France	'72	332,210,	57,382,	223,099,	82,139,	31,078,*	312,720,
Portugal	'65	5,500,	1,925,	550,	6,600,	15,400,	—
Spain	'57	168,141,	76,428,	—	24,727,	—	—
Austria proper	'71	35,052,	44,934,	88,728,	72,056,	10,672,	174,730,
Italy	'65	94,592,	20,	535,	7,700,	44,968,	26,161,
Greece	'67	4,982,	2,128,	196,	9,†	3,170,	10,†
United States	'73	281,255,	32,044,	270,340,	15,142,	932,274,	106,089,
British Possessions—							
Dominion of Canada	1868	36,365,	—	51,600,	6,800,	3,400,	not stated
Prince Edward Island	'71	269,	176,	3,128,	—	2,	3,375,
New South Wales	'74	2,238,	66,	302,	17,	4,120,	42,‡
Victoria	'74	4,752,	502,	1,741,	8,	40,	109,‡
South Australia	'74	6,178,	126,	21,	—	—	13,‡
Tasmania	'74	947,	124,	561,	—	—	25,‡
New Zealand	'73	3,188,	325,	2,618,	—	—	62,‡
Cape of Good Hope	'65	1,389,	308,	433,	174,	324,	not stated

* Including millet. † Cwts. ‡ Tons.

VI.—*The Railroads of the United Kingdom.*

The Railway Returns for the United Kingdom for the year 1874, which have recently been issued, contain some interesting summary tables exhibiting the progress made in this branch of steam communication in the kingdom since the year 1854. The following comparison of some of the particulars in the first summary affords an idea of the extension of our railway system in the period alluded to:—

		In 1854.	In 1874.
Length of line open for traffic on 31st December	miles	8,053	16,449
Total capital authorised	Mln. £	368	704
„ paid up	„	286.	609
Capital paid up per mile of line open	£	35,523	37,078
Number of passengers conveyed exclusive of season ticketholders	Mlns.	111	477
Gross receipts from traffic	Mln. £	20	56
Proportion from passengers	per cnt.	50·68	43·75
„ goods	„	49·32	56·25
Working expenditure	Mln. £	13*	32
Proportion to total receipts	per cnt.	47*	55
Proportion of net receipts to total capital paid up	„	4·19*	4·37

* In 1860, not given before.

Thus it will be seen that the total length of railways open for traffic was more than doubled in the above-named period. It must also be borne in mind that several of the principal companies have, during recent years, laid down treble and quadruple sets of rails, which has still further increased the carrying power of the lines. Of the 16,449 miles of railway open on the 31st December last, 11,622 miles were in England and Wales, 2,700 in Scotland, and 2,127 in Ireland. The amount of capital paid up per mile of railway open was considerably higher in 1874 than in 1854. This is accounted for partly by the creation of the extra lines above alluded to, and partly by the high price of fuel, iron, and wages in the latter year. The total length of double or more lines in 1874 was 8,749, and of single lines of railway 7,700.

The increase in the passenger traffic was very considerable, having risen from 111 millions in 1854 to 477 millions in 1874. These numbers are exclusive of season or periodical tickets, which amounted to 493,000 in 1874; but no records are kept of the number of journeys made by the holders thereof. The following were the numbers of passengers of each class during the year 1874: first class, 39 millions; second class, 72 millions; third class, including parliamentary, 366 millions;—total, 477 millions.

The amount of gross receipts from traffic, it will be observed, more than kept pace with the increased extension of the lines; and the receipts per train mile have risen from 5*s.* 6½*d.* to 5*s.* 8*d.* The proportions from passengers and goods were not the same throughout the period, the receipts from goods' traffic having increased in greater proportion than those from passenger traffic.

There are no returns of the amount of working expenditure prior to the year 1860. In that year it amounted to 13 millions, or 47 per cent. of the receipts. The corresponding expenditure in 1874 rose to 32 millions, or 55 per cent. of the receipts. The cause of the increased expense of working was no doubt in great measure due to the higher prices of fuel and materials and wages in 1874 as compared with those in 1860. Notwithstanding these drawbacks, the proportion of net receipts to the total paid-up capital averaged higher in 1874 than in 1860, amounting to 4·37 per cent. against 4·19 per cent.

The total rolling stock on the 31st December, 1874, amounted to 11,935 locomotives, 25,441 carriages for passengers only, 9,686 vehicles attached to passenger trains, 338,835 waggons and trucks for goods traffic, and 5,937 carriages and trucks used on the lines, not included in the other totals.

The second summary in the returns, showing the rates of dividend paid, is very interesting, as exhibiting the value of railway property in the three divisions of the kingdom. This table, which only relates to the last five years, gives the amount of ordinary, guaranteed, and preferential capital, classed according to the amount of dividend paid in each year. As the greater part of the guaranteed and preferential stock receives fixed rates of dividend, it is proposed only to abstract the proportions of dividends earned by the ordinary share capital, about which less is known to the public.

Statement of the Amount of Ordinary Share Capital Classed according to the Rate per Cent. of Dividend Paid, in each Division of the United Kingdom, in each Year from 1870 *to* 1874.

I. ORDINARY CAPITAL.

[00,000's omitted, thus 1,9 = 1,900,000: ,2 = 200,000: — = nil, or less than 100,000.]

Rate per Cent. of Dividend.	England and Wales.					Scotland.				
	1870.	1871.	1872.	1873.	1874.	1870.	1871.	1872.	1873.	1874.
	£	£	£	£	£	£	£	£	£	£
Capital of new companies, the lines of which were in course of construction and no dividend earned	1,9	1,5	2,1	2,6	2,0	,2	—	,2	,4	,3
Capital of constructed lines upon which no dividend was paid....	22,2	25,5	24,4	25,5	36,2	6,6	2,6	2,5	6,0	2,0
Dividends Paid.										
Not exceeding 1 per cent................	18,3	,6	8,9	8,5	,8	,3	4,5	1,5	,9	5,0
Exceeding 1 and not exceeding 2 %	5,6	9,1	4,8	,6	9,4	1,0	,9	3,6	,3	,3
„ 2 „ 3 „	7,6	16,0	1,4	14,7	7,3	,1	—	,2	,4	4,8
„ 3 „ 4 „	27,1	11,6	24,7	16,4	14,4	6,3	,2	,2	7,6	9,6
„ 4 „ 5 „	14,5	22,4	10,6	9,1	25,9	,4	,4	6,8	6,4	,7
„ 5 „ 6 „	6,4	17,3	28,0	16,2	33,8	4,0	11,1	1,4	,1	,1
„ 6 „ 7 „	64,9	14,4	2,9	34,2	53,8	,1	—	4,7	,1	,1
„ 7 „ 8 „	18,8	51,5	54,7	51,8	2,1	,3	,3	,2	,2	,1
„ 8 „ 9 „	1,7	2,1	32,5	2,2	18,0	—	—	—	—	,1
„ 9 „ 10 „	2,1	19,1	2,3	19,2	,6	—	—	—	—	—
„ 10 „ 11 „	,3	—	—	—	1,1	—	—	—	—	—
„ 11 „ 12 „	2,6	,3	,2	3,8	3,0	—	—	—	—	—
„ 12 „ 13 „	—	3,2	3,3	,6	—	—	—	—	—	—
Total	194,5	195,0	201,5	205,8	209,0	19,7	20,5	21,9	22,9	23,7

Statement of the Amount of Ordinary Share Capital—Contd.

Rate per Cent. of Dividend.	Ireland.					United Kingdom.				
	1870.	1871.	1872.	1873.	1874.	1870.	1871.	1872	1873.	1874.
	£	£	£	£	£	£	£	£	£	£
Capital of new companies, the lines of which were in course of construction, and no dividend earned	,4	,5	,5	,4	,2	2,6	2,1	3,0	3,5	2,5
Capital of constructed lines upon which no dividend was paid....	2,3	1,8	2,7	2,5	2,8	31,2	30,0	29,7	34,1	41,1
Dividends Paid.										
Not exceeding 1 per cent.	,1	—	,1	—	,2	18,7	5,2	10,6	9,5	6,2
Exceeding 1 and not exceeding 2 %	1,0	,4	—	,3	,1	7,7	10,4	8,4	1,3	9,8
" 2 " 3 "	,7	1,3	,8	,6	,6	8,6	17,4	2,0	15,8	12,9
" 3 " 4 "	2,1	,1	1,2	,7	8,1	35,6	11,9	26,2	24,7	27,3
" 4 " 5 "	6,9	3,4	3,4	3,8	5,8	21,9	26,2	21,0	19,3	32,5
" 5 " 6 "	,6	5,9	5,0	5,1	,7	11,0	34,4	34,5	21,6	34,7
" 6 " 7 "	—	,5	1,0	—	1,5	65,0	14,9	8,7	34,3	55,5
" 7 " 8 "	—	—	,5	1,5	—	19,1	51,9	55,5	53,6	2,2
" 8 " 9 "	—	—	—	,3	—	1,7	2,1	32,6	2,6	18,1
" 9 " 10 "	,3	,3	,3	—	,3	2,5	19,4	2,6	19,2	1,0
" 10 " 11 "	—	—	—	—	—	,3	—	—	—	1,1
" 11 " 12 "	—	—	—	—	—	2,6	,3	,2	3,8	3,0
" 12 " 13 "	—	—	—	—	—	—	3,2	3,3	,6	—
Total	14,9	14,6	15,5	15,6	15,7	229,2	230,2	239,0	244,4	248,5

The above figures sufficiently explain themselves; but the subjoined table, showing the amount of ordinary stock, which received over 5 per cent. dividend, may be interesting:—

Years.	England and Wales.		Scotland.		Ireland.	
	Amount of Capital.	Percentage of Total.	Amount of Capital.	Percentage of Total.	Amount of Capital.	Percentage of Total.
	Mln. £		Mln. £		Mln. £	
1870	96,8	50	4,4	22	,9	6
'71	107,9	55	11,4	55	6,7	46
'72	123,9	61	6,3	29	6,8	44
'73	128,0	62	,4	1¾	6,9	44
'74	112,4	54	,4	1⅜	2,5	16

The figures in this table are to be read thus, that in 1870 96,800,000*l.* or 50 per cent. of the ordinary share capital of English lines received a dividend exceeding 5 per cent. The steady progress of the English lines up to 1873, as indicated above, appears to warrant the assumption that with a careful extension of new lines, and with economical management, the greater part of the ordinary share capital would in time become more productive than was at one time expected.

It only remains to notice a point, which, however, is pretty generally known, namely, the decrease in the amount of loans raised by railways and the increase of debenture stock. The complete returns on this subject do not commence before 1859. The following statement shows the amounts for that year, for the year 1867 (the year in which the amount of loans attained their maximum), and for 1874:—

On 31st December in each Year.	Amount of Loans.	Amount of Debenture Stock.
	£	£
1859	80,628,000	5,619,000
'67	110,392,000	15,637,000
'74	49,266,000	111,170,000

VII.—*The Railroads of the United States.*[*]

In the absence of official returns relating to the railway system of the United States, the public are greatly indebted to the energy and ability of Mr. H. V. Poor, who has now for some years past issued a *Manual of the Railroads of the United States*, containing a very full statistical account of the progress of American railways. It appears, from the present volume, that in 1830 only 23 miles of railway were in operation in the States, this mileage increased to 2,818 in 1840, and to 4,377 in the year 1844. For the latter and subsequent years the statistics show the progress of the railway system in the various groups of States composing the Union. The subjoined table brings the returns down to the year 1873:—

Groups of States.	1844.	1850.	1860.	1870.	1873.
	Miles.	Miles.	Miles.	Miles.	Miles.
New England	865	2,508	3,660	4,494	5,314
Middle	3,094	3,202	6,706	10,991	14,019
Western	312	1,276	11,064	23,540	33,772
Southern	1,106	2,035	9,182	12,196	15,353
Pacific	—	—	23	1,677	2,193
Total	4,377	9,021	30,635	52,898	70,651

The subjoined statement, extracted from table, p. 52, in the *Manual*, affords at a glance the position of the railways in operation in the various groups of States in the year 1873:—

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[*] From the seventh annual number of the *Manual of the Railroads of the United States*, presented to the Society by the Editor, Mr. H. V. Poor, New York.

	States.					
	New England.	Middle.	Western.	Southern.	Pacific.	Total.
Population	3,640,000	10,828,000	14,605,000	11,285,000	853,000	41,211,000
Area in square miles	68,348	137,628	1,038,588	789,378	458,374	2,492,316
Miles of railway	5,314	14,019	33,772	15,353	2,193	70,651
Number of inhabitants to a mile of railway	685	772	406	735	389	583
Number of square miles to a mile of railway	12·9	9·9	30·7	51·4	209·0	35·3
Capital stock	£ 29,000,000	£ 135,000,000	£ 176,000,000	£ 48,000,000	£ 17,000,000	£ 405,000,000
Funded or other debt	25,000,000	100,000,000	184,000,000	59,000,000	15,000,000	383,000,000
Total capital account	54,000,000	235,000,000	360,000,000	107,000,000	32,000,000	788,000,000
Cost of railway per mile	10,000	14,000	11,000	8,000	20,000	12,000
Receipts from Passengers	5,000,000	9,000,000	11,000,000	3,000,000	1,000,000	29,000,000
Per cent. to total	42·5	21·8	24·4	28·8	36·6	30·8
Receipts from freight	£ 6,000,000	£ 32,000,000	£ 33,000,000	£ 8,000,000	£ 2,000,000	£ 81,000,000
Per cent. to total	57·5	78·2	75·6	71·2	63·4	69·2
Total receipts	£ 11,000,000	£ 41,000,000	£ 44,000,000	£ 11,000,000	£ 3,000,000	£ 110,000,000
Per cent. of receipts to cost	19·7	22·5	11·8	10·7	9·9	13·1
Receipts to mile of line	£ 2,000	£ 3,000	£ 1,000	£ 1,000	£ 2,000	£ 2,000
Receipts to an inhabitant	£ s. 3 –	£ s. 3 15	£ s. 3 –	£ s. – 19	£ s. 4 18	£ s. 3 2
Working expenses	£ 8,000,000	£ 26,000,000	£ 29,000,000	£ 7,000,000	£ 1,300,000	£ 71,300,000
Percentage of working expenses to receipts	66·5	64·1	65·8	66·2	42·0	65·1
Net earnings	£ 3,000,000	£ 15,000,000	£ 15,000,000	£ 4,000,000	£ 1,700,000	£ 38,700,000
Percentage of net earnings to receipts	33·5	35·9	34·2	33·8	58·0	34·9
Percentage of net earnings to cost of railways	6·4	6·1	4·2	3·6	5·7	4·96
Dividends paid	£ 2,000,000	£ 8,000,000	£ 4,000,000	£ 146,000	£ 340,000	£ 14,486,000
Percentage of dividend to capital stock	6·36	5·60	2·25	0·40	2·00	3·45

In accounting for the development of the American railway system in recent years, Mr. Poor makes the following observations :—

"Within the past five years 28,396 miles of railroads have been constructed in this country. At $50,000 per mile, the cost of these works has been $1,381,850,000. In the meantime, $75,000,000 have been annually expended in enlarging the accommodations and increasing the facilities for business of roads already in operation—in other words, there has been expended upon our railroads $350,000,000 annually in the last five years. If we have not exceeded our means in the construction of these works, we have pushed this great interest out of all proportion to others. We have only to stop construction to have the equilibrium speedily restored. The method is a very simple one. The earnings of the railroads of the Western States for the past year equalled $14·33 per head of the population. The present year, but for the effect of the recent panic, they would equal $15·33 per head, and in 1875 $16·33 per head. This gain is certain to be made as soon as the country recovers from the present prostration. In the meantime, population is increasing at the rate of more than one million annually. The contribution of this increase alone to railroads will add, at the present rate of earnings, $14,330,000 annually to their gross receipts. But the population of the country increases at the rate of about 2·50 per cent. annually, whilst the earnings of our railroads increase in about five-fold greater ratio. The question of earning is one of population, the pioneer contributing as much per head as a citizen of old and densely settled States.

"The construction of railroads for a few years to come will proceed at a very slow rate compared with the past. Considering the vast area of the country, however, and the rapid increase of its population, new works will be constantly constructed, even in the States that have the greatest extent of line in ratio to their area and population. Many portions of the States east of the Mississippi are still poorly supplied with railroads. The theatre of their most active construction for the immediate future is, however, to be in the interior of the continent, for the purpose of opening outlets for the vast mineral deposits which are found in great abundance throughout the whole chain of the Rocky Mountains. The construction of the Pacific Railroad rendered possible, for the first time, the profitable working of these deposits by the construction of lateral branch roads based upon this great line. The whole mountain region has a genial climate, possesses vast tracts of arable land, and, in addition to the precious metals, inexhaustible deposits of excellent coal for the working of the mines and for all other industrial interests. As the interior of the country is mainly without forests, it would, but for coal, be capable of only a very inconsiderable development. With coal there will be hardly any limit to such development. Its principal products—the ores of precious metals—will bear a very high charge for transportation. These ores are exported in great quantities to the Eastern States and Great Britain for smelting; they already constitute no small portion of the traffic of the Pacific roads, and are one of the principal causes of their success. The local roads of this section have, without exception it is believed, proved highly successful and remunerative, and they will be constructed as new mining districts are discovered throughout every portion of that vast region which, with the Pacific States, which have only just begun to be occupied, has an area of a million of square miles. The population of this region hardly equals one person to the square mile. What it may lack in agricultural is probably fully compensated by the abundance of its mineral wealth. It is to be henceforth one of the most attractive fields for the capital and enterprise of our people. With the progress of railroads and of settlements the production of the precious metals would soon reach an amount far exceeding that of any former period. The roads to be constructed in it will be mainly of the narrow guage—three feet and under,—a guage which is admirably adapted to traverse contracted and winding valleys, as well as to overcome grades hitherto supposed to be insurmountable by locomotive engines.

" With the vast amount that has been expended upon our railroads, it was inevitable that their construction, at anything like the rate of the past, and which absorbed the capital and energies of almost our entire population, should come to a sudden halt. Nothing is so absorbing as the passion for the construction of these works. They make over society, as it were, anew. They increase its wealth almost beyond computation. From the vast number of opportunities they afford it has been very easy to become speedily rich through their management. Waterings, speculation in their stocks, which could be raised or depressed at will by those behind the scenes, interest in contracts for construction or furnishing materials by which companies have often paid double prices for what they received, have brought to too many, who have been lucky enough to secure their possession, colossal fortunes almost in a day. The moment a party got possession of an important line it became a great power. There was hardly a person of wealth or influence in the land that was not a leader or member of some such party. The cupidity of the great mass of small investors was almost equally stimulated by offers of rates of interest which promised very speedily to return to them the whole capital they invested. The mania thus became almost universal.

" It is characteristic of our people to do everything with an emphasis. The recent civil war was a case in point. The whole North took the field, and with one mighty blow effaced every trace of the greatest rebellion the world ever saw. Railroads next engaged their almost undivided attention, and most fortunately, for with the vast amount of paper money afloat, and without useful objects to absorb their activity and capital, these would have almost inevitably run wild after purely speculative schemes. If millions of dollars have been lost in constructing unproductive works, or works which anticipate the wants of the country or the means of their support, the increase in the value of property due to their construction has exceeded threefold their cost. If individuals have suffered the nation has been gaining in a wonderful ratio. But it is impossible, in a country like our own, with all its articulations so perfectly free, and where the humblest capacity can, in some field or another, find the amplest scope, that every interest should proceed with well-ordered and uniform steps. The construction of railroads has been the engrossing theme, their proper conduct after they are opened, which is a still more difficult task, is to be the next one. With but few new lines, the earnings of those already in operation must increase with great rapidity, so that all that will be wanting to render the investment in the greater number of lines productive, will be upright and competent management.

" The most unpromising feature in the future is the condition of our currency. No adequate steps have yet been taken towards its restoration to a specie-standard. A great change in public opinion has undoubtedly taken place during the past year. The weight of influence is now decidedly in favour of such restoration with the least delay practicable. The recent action of the President has greatly strengthened the movement in that direction, and another session of congress can hardly pass without the adoption of some decisive measures. There is no interest that has so much at stake in the question as railroads, as almost every company, as a means of getting money, has made nearly all their bonds, principal and interest, payable in gold. If they would reduce the rates of interest they are compelled to pay they must have their revenues payable in the same currency in which they have to pay their own debts."

VIII.—*Population of some of the Larger Towns of Europe.*†

The following table contains the populations of towns of Europe of at least 30,000 inhabitants, together with the names of the countries in which they are situated and the year in which the census was taken, or the estimate based on the census made. Towns marked * are capitals.

Name of Town.	Country.	Year.	Population.
*London	England	1874	3,400,701
*Paris	France	'72	1,851,792
*Vienna	Austria	'75	1,020,770
*Berlin	Prussia	'74	920,000
*St. Petersburg	Russia	'71	691,093
Moscow	,,	'71	611,974
*Constantinople	Turkey	'74	600,000
Liverpool	England	'74	510,640
Glasgow	Scotland	'74	508,109
Manchester	England	'74	488,407
Naples	Italy	'71	448,335
Birmingham	England	'74	360,892
*Brussels	Belgium	'74	345,017
*Madrid	Spain	'70	332,024
Lyons	France	'72	323,417
Dublin	Ireland	'74	314,666
Marseilles	France	'72	312,864
Amsterdam	Holland	'73	281,944
Warsaw	Poland	'74	279,502
Leeds	England	'74	278,798
*Budapest	Hungary	'69	270,476
Milan	Italy	'71	261,985
Sheffield	England	'74	261,029
*Rome	Italy	'71	244,484
Hamburg	Germany	'71	240,251
*Lisbon	Portugal	'64	224,063
Palermo	Italy	'71	219,398
Turin	,,	'71	212,644
Edinburgh	Scotland	'74	211,691
Breslau	Prussia	'71	207,997
*Copenhagen	Denmark	'74	195,000
Bordeaux	France	'72	194,055
Barcelona	Spain	'60	189,948
Prague	Bohemia	'69	186,479
Bristol	England	'71	182,552
*Dresden	Saxony	'71	177,089

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† From third edition of Brachelli's "Staaten Europa's."

Population of some of the Larger Towns of Europe—Contd.

Name of Town.	Country.	Year.	Population.
Belfast	Ireland	1871	174,394
*Munich	Bavaria	'71	169,693
Florence	Italy	'71	167,093
Bradford	England	'71	163,056
Odessa	Russia	'73	162,814
Lille	France	'72	158,117
*Stockholm	Sweden	'73	147,249
Antwerp	Belgium	'74	141,910
*Bucharest	Roumania	'60	141,754
Newcastle-on-Tyne	England	'74	135,437
Hull	„	'74	130,996
Stoke-upon-Trent	„	'71	130,985
Genoa	Italy	'71	130,269
Cologne	Prussia	'71	129,233
Venice	Italy	'71	128,901
Ghent	Belgium	'74	128,424
Rotterdam	Holland	'73	125,893
Toulouse	France	'72	124,852
Portsmouth	England	'74	120,436
Dundee	Scotland	'71	119,141
Nantes	France	'72	118,517
Seville	Spain	'60	118,298
Bologna	Italy	'71	115,957
Magdeburg	Prussia	'71	114,509
Liège	Belgium	'74	113,774
Oldham	England	'71	113,100
Königsberg	Prussia	'71	112,092
Messina	Italy	'71	111,854
Saint-Etienne	France	'72	110,814
Brighton	England	'74	109,319
Valencia	Spain	'60	107,703
Leipzig	Saxony	'71	106,925
Leicester	England	'74	106,202
Sunderland	„	'74	104,378
Hanover	Prussia	'74	104,243
Kischinew	Russia	'67	103,998
Rouen	France	'72	102,470
Riga	Russia	'67	102,043
Adrianople	Turkey	'74	100,000
Livorne	Italy	'71	97,096
*Hague	Holland	'73	94,895
Malaga	Spain	'60	94,732
*Stuttgart	Würtemburg	'71	91,623
Frankfort-on-Maine	Prussia	'71	91,040
Jassy	Roumania	'60	90,236
La Valette	Malta	'71	90,000
Salonika	Turkey	'74	90,000
Oporto	Portugal	'64	89,194
Danzig	Prussia	'71	88,975
Aberdeen	Scotland	'71	88,189
Murcia	Spain	'60	87,803
Lemberg	Austria	'69	87,109
Havre	France	'72	86,825
Nottingham	England	'71	86,621
*Strasburg	Alsace-Lorraine	'71	85,529
Preston	England	'71	85,427

Population of some of the Larger Towns of Europe— Contd.

Name of Town.	Country.	Year.	Population.
Catania	Italy	1871	84,397
Nuremburg	Bavaria	'71	83,214
Bremen	Germany	'71	82,969
Bolton	England	'71	82,853
Wilna	Russia	'67	81,730
Gratz	Austria	'69	81,119
Norwich	England	'71	80,386
*Christiania	Norway	'72	80,000
Riew	Russia	'67	79,773
Kasan	"	'67	78,602
Cork	Ireland	'71	78,382
Blackburn	England	'71	76,339
Stettin	Prussia	'71	76,280
Roubaix	France	'72	75,987
Barmen	Prussia	'71	74,449
Aix-la-Chapelle	"	'71	74,146
Altona	"	'71	74,102
Brünn	Austria	'69	73,771
Ferrara	Italy	'71	72,447
Rheims	France	'72	71,994
Cadiz	Spain	'60	71,521
Elberfeld	Prussia	'71	71,384
Trieste	Austria	'69	70,274
Huddersfield	England	'71	70,253
Szegedin	Hungary	'67	70,179
Dusseldorf	Prussia	'71	69,365
Saratoro	Russia	'67	69,244
Toulon	France	'72	69,127
Plymouth	England	'71	68,758
Wolverhampton	"	'71	68,291
Chemnitz	Saxony	'71	68,229
Lucca	Italy	'71	68,204
Geneva	Switzerland	'70	68,165
Saragossa	Spain	'60	67,428
Granada	"	'60	67,326
Verona	Italy	'71	67,080
Brest	France	'72	66,272
Padua	Italy	'71	66,107
Halifax	England	'71	65,510
Devonport	"	'71	64,034
Amiens	France	'72	63,747
Rochdale	England	'71	63,485
Utrecht	Holland	'73	63,140
West Ham	England	'71	62,919
Nimes	France	'72	62,394
Versailles	"	'72	61,686
Gothenburg	Sweden	'73	61,599
Charkow	Russia	'67	59,968
Ravenna	Italy	'71	58,904
Anvers	France	'72	58,464
Greenock	Scotland	'71	57,821
*Brunswick	Brunswick, Germany	'71	57,782
Montpellier	France	'72	57,727
Lula	Russia	'67	57,374
Crefeld	Prussia	'71	57,105
Allessandria	Italy	'71	57,079

Population of some of the Larger Towns of Europe—Contd.

Name of Town.	Country.	Year.	Population.
Swansea	Wales	1871	56,995
Zurich	Switzerland	'70	56,695
Modena	Italy	'71	56,690
Posen	Prussia	'71	56,374
Maria-Theresiopel	Hungary	'69	56,323
Croydon	England	'71	55,652
Limoges	France	'72	55,134
Carthagena	Spain	'60	54,315
Mayence	Germany	'71	53,918
Southampton	England	'71	53,741
Palma	Spain	'60	53,019
Stockport	England	'71	53,014
Nancy	France	'72	52,978
Mulhouse	Alsace-Lorraine	'71	52,825
Halle-on-Saale	Prussia	'71	52,629
Berditschew	Russia	'67	52,563
Bath	England	'71	52,557
Nice	France	'72	52,377
Jerez-de-la-Frontera	Spain	'60	52,158
Rennes	France	'72	52,044
Merthyr-Tydvil	Wales	'71	51,949
Essen	Prussia	'71	51,513
Metz	Alsace-Lorraine	'71	51,388
Augsburg	Bavaria	'71	51,220
Reggio nell' Emilia	Italy	'71	50,657
Barri-delle Puglie	,,	'71	50,524
Pisa	,,	'71	50,341
Serajewo	Turkey	'74	50,000
Gallipoli	,,	'74	50,000
Philippopel	,,	'74	50,000

Note.—The following towns contain between 40,000 and 50,000 inhabitants:—Cracow, Derby, Besançon, Walsall, Orleans, Gateshead, Paisley, Astrachan, Athens, Bruges, West Bromwich, Le Mans (France), Presburg (Hungary), Cassel (Prussia), Cherson (Russia), Chatham, Ancona, Parma, Birkenhead, South Shields, Cronstadt, St. Helens, Bâle (Switzerland), Leith, Potsdam (Prussia), York, Dudley, Erfurt (Prussia), Tours (France), Valladolid (Spain), Frankfort-on-Oder (Prussia), Ipswich, Grenoble (France), Dijon (France), Cordova (Spain), Cheltenham, Yarmouth, Caen (France).

IX.—*The Wheat Crop of* 1875.

The following is a letter addressed to the Editor of the *Times* by Mr. James Caird, C.B. (Inserted in the issue of 27th August, 1875.)

"As thrashing proceeds, and the yield of a seemingly bulky crop begins to be proved, there can be no doubt that the wheat crop is much below that of last year, and less than an average crop. The best qualities of wheat and the best wheat counties are this year the most deficient. In one trial of a heavy crop made for me the proportion of tail to good wheat was three times greater than last year.

The soundest crops are on the western side of the country, from Somerset to Ayrshire. The discoloured and defective run along the whole eastern seaboard, from Kent to East Lothian, and include the principal wheat counties, and about five-sixths of the wheat area of the kingdom. Such is the result of my analysis of the careful returns from each county, collected from practical men by the Editor of the '*Agricultural Gazette*,' and as far as possible confirmed by personal inquiry and observation.

"The returns of acreage are not yet ready for publication, and it would certainly be more prudent to wait for the facts which they will disclose before offering a final estimate of our requirements; but the certainty of our needing a larger supply from abroad makes me so far anticipate the publication of the returns. That they will show a considerable diminution on the extent of last year I cannot doubt. The wheat-sowing season was not over favourable, and the much higher relative prices of barley and oats offered every inducement to the extension of the latter. The Irish acreage returns for 1875, just issued, show a diminution in wheat of 14 per cent. from 1874, a proof that the causes mentioned have largely influenced the Irish farmers, and will, to a certain extent, though not nearly so great an extent, have influenced ours. Under the double influence of deficient yield and diminished extent it will be prudent to reckon on a reduction in the total yield of 2,000,000 quarters, which is equivalent to rendering us dependent on the foreigner for six and a-half instead of five and a-half months' consumption.

"At this time last year, with a large crop at home and general abundance abroad, I ventured to name 45*s.* as the probable average price of that year's crop, which was a reduction of nearly 25 per cent. from the previous four years' average. The actual average price realised for crop 1874 has been 44*s.* 5*d.* But the wheat harvest this year is nowhere abundant, and the best we can hope from it is that the surplus of last year in Western Europe may so make up the supply as to prevent competition with us in the purchase of foreign wheat. We shall have to pay a higher price for the coming year and use the wheat with greater economy; for the low price undoubtedly led to largely increased consumption, both in the shape of bread and in the extensive use of the cheaper qualities of wheat in substitution for other articles as cattle food. In no other way could we have absorbed the vast supplies poured in upon us, as there does not appear to remain any excessive quantity in farmers' hands or granary.

"Considering the extent to which this country is now dependent on foreign corn, the abundance or otherwise of foreign harvests becomes a question of the first importance to us. The home growth of wheat during the last twenty-five years has undergone a gradual diminution, and, except under the influence of a considerably higher relative price as compared with barley and oats, there seems much probability that this will continue. At the full rate of consumption of the past year we may reckon the average supply of each individual of the population at 3 cwt., or 5½ bushels, which is equal to nearly 1 lb. per head per day. But even within the last ten years the proportion in which this is furnished from our own fields and from abroad has undergone a marked and important change. Previous to 1860 the annual breadth of our wheat land exceeded 4,000,000 acres, when the population was barely 28,000,000. The average breadth during the last eight years is 200,000 acres less, while the population has increased to 32,000,000. The produce of 3,000,000 acres of foreign land sufficed for our wants before 1870, that of 4,500,000 acres has been consumed in each year since that time. Let us look at the principal sources of our supply.

"The consumption of wheat in the United Kingdom in the year 1874 may be stated in round numbers at 100,000,000 cwt., in the following order of supply:—Home growth, 50·7; United States and Canada, 31·5; Russia, 5·8; Germany, 4·0; Chili, 2·0; France, 1·1; other countries, 4·7; total, 100. This is subject to considerable fluctuation, Russia sometimes rising to 18 per cent., and America so recently as 1872 falling to 12. But on the average of the last six years the United States and Canada have taken the leading place, and Russia the second. War seems to have exercised a marked effect on the two countries, upon which previous to 1870 we were in the next degree dependent. Germany for five years previous to the war with France, gave us over 7 per cent., and France nearly 4 per cent. In the last five years, with a higher range of prices, Germany could spare us little more than 4, and France only 2 per cent. Chili comes next to France in the average of recent years, and smaller quantities arrive in varying proportions from other countries. Taking a period of the last fifteen years, I find that the countries of Western Europe—Germany, France, Denmark, and Spain—show a declining export, either from a greater home consumption or lessened production. Our mainstay are the United States and Canada and the Black Sea ports of Russia, whose rich and unexhausted lands, with a comparatively sparse population, will, we may hope, find for many years their most profitable outlet for an abundant surplus in the United Kingdom.

"But we must be prepared to pay more for it than last year's price. A rise of 10*s.* a-quarter brought an increase from Russia of 50 per cent. in 1867, and again in 1871. The impetus to production in America given by four successive years of good prices was not abated by the fall of 25 per cent. during last year, for the network of railways leading from the West to the Atlantic ports, competing for freights, afforded means of transport on terms so low as to admit of the crop being moved even at this great reduction of price. The American crop of the present year is not equal to that of last, but quite large enough to spare us a vast supply if we can afford to pay for it. And both in America and Russia there is good reason to believe that large stores of last year's corn will be opened by a remunerative price.

"The benefit to the consumers in this country of a good harvest can now be definitely stated by the realised result of that of 1874. This is the only country in which foreign corn can always meet with a market, and in a year such as the past the abundance of all foreign countries found this the only outlet. The weight of foreign corn of every kind imported during the two last harvest years has varied extremely little, being in round numbers 4,500,000 tons and 4,600,000 tons respectively. The cost of this in 1873-74 was 54 millions sterling, and in 1874-75, 45 millions; the larger supply of the past year thus costing about 9 millions less than the somewhat larger import of the previous year. To this difference must be added a considerable saving both in the quantity and price of foreign potatoes imported. When we add that the saving in the cost of the home supply of corn, the total gain to the British consumer from the fine harvest of 1874 cannot have been less than 20 millions sterling."

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—Quarter ended March, 1875.

BIRTHS and DEATHS—Quarter ended June, 1875.

A.—*Serial Table of* Marriages, Births, *and* Deaths, *returned in the Years* 1875-69, *and in the* Quarters *of those Years.*

Calendar Years, 1875-69:—*Numbers.*

Years.........	'75.	'74.	'73.	'72.	'71.	'70.	'69.
Marriages No.	—	201,605	205,615	201,267	190,112	181,655	176,970
Births .... „	—	854,307	829,778	825,907	797,428	792,787	773,381
Deaths .... „	—	526,701	492,520	492,265	514,879	515,329	494,828

Quarters *of each Calendar Year*, 1875-69:

(I.) Marriages:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	42,237	41,417	41,217	40,539	36,305	36,455	35,752
June .... „	—	52,737	53,408	50,380	48,831	46,720	43,202
September „	—	49,014	49,709	49,818	46,536	43,900	43,978
December „	—	58,437	61,281	60,530	58,440	54,580	52,038

(II.) Births:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	215,251	214,437	215,744	208,752	209,523	206,366	203,775
June .... „	214,650	217,605	206,516	208,790	201,165	203,615	188,618
September „	—	209,898	204,167	201,746	193,271	192,521	190,394
December „	—	212,367	203,351	206,619	193,469	190,285	190,594

(III.) Deaths:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	162,514	136,528	132,432	134,952	138,393	143,773	133,096
June .... „	130,797	123,990	118,582	120,835	120,793	121,128	118,947
September „	—	124,099	114,676	118,927	121,332	124,297	114,644
December „	—	142,084	126,830	117,551	134,361	126,131	128,141

Annual Rates of MARRIAGES, BIRTHS, *and* DEATHS, *per* 1,000 PERSONS LIVING *in the Years* 1875-69, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1875-69:—*General Ratios.*

YEARS	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
Estmtd. Popln. of England *in thousands* in middle of each Year	23,944,	—	23,649,	23,356,	23,068,	22,783,	22,501,	22,223,
Persons Married	—	16·9	17·1	17·6	17·5	16·7	16·1	15·9
Births	—	35·4	36·1	35·5	35·8	35·0	35·2	34·8
Deaths	—	22·3	22·3	21·1	21·3	22·6	22·9	22·3

QUARTERS *of each Calendar Year*, 1875-69.

(I.) PERSONS MARRIED :—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74	'74.	'73.	'72.	'71.	'70.	'69.
March	14·3	13·8	14·2	14·3	14·1	12·9	13·2	13·8
June	—	17·2	17·9	18·3	17·5	17·2	16·7	15·6
September	—	16·4	16·4	16·9	17·1	16·2	15·5	15·7
December	—	20·0	19·6	20·8	20·8	20·4	19·2	18·6

(II.) BIRTHS :—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	36·5	37·0	36·8	37·5	36·3	37·3	37·3	37·3
June	36·0	36·2	36·9	35·5	36·3	35·5	36·4	34·1
September	—	34·4	35·2	34·7	34·7	33·7	34·0	34·1
December	—	34·4	35·6	34·5	35·5	33·7	33·6	34·1

(III.) DEATHS :—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	27·5	24·5	23·4	23·0	23·5	24·7	26·0	24·4
June	21·9	21·4	21·0	20·4	21·0	21·3	21·6	21·5
September	—	21·1	20·8	19·5	20·5	21·1	22·0	20·5
December	—	22·2	23·8	21·5	20·2	23·4	22·3	22·9

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE *in each of the Nine* QUARTERS *ended June*, 1875.

1 Quarters ending	2 Average Price of Consols (for Money).	3 Average Rate of Bank of England Discount.	4 Average Price of Wheat per Quarter in England and Wales.		5 Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcase), with the *Mean* Prices. Beef.	6 Mutton.	7 Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	8 Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week. In-door.	9 Out-door.	10 Sea-borne Coal in London Market per Ton.	
1873	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
June 30	93⅜	5·2	56	5	6—8¾ 7⅜	6¾—9½ 8⅛	183—242 212	135,638	666,261	29	3
Sept. 30	92⅝	3·8	61	4	5¾—8¾ 7¼	6½—9¼ 7⅞	95—120 107	127,672	632,417	30	1
Dec. 31	92¾	6·3	61	1	5—8½ 6¾	5¾—8½ 7⅛	96—117 107	137,409	625,316	30	8
1874											
Mar. 31	92	3·6	62	2	5¼—8¼ 6¾	5½—8¼ 6⅞	112—127 119	146,082	641,910	23	5
June 30	93	3·4	61	1	5—8 6½	5—8¼ 6⅝	135—165 150	133,844	614,641	23	7
Sept. 30	92⅜	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·7	44	4	4⅞—8¼ 6½	4¾—8 6¼	73—96 84	138,868	587,772	24	7
1875											
Mar. 31	92⅝	3·7	42	6	5—8 6½	4⅝—8 6½	81—111 96	146,708	622,652	22	5
June 30	93⅝	3·5	42	6	5¼—8¼ 6¾	5½—9½ 7½	80—120 100	131,773	598,341	20	8

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in Ten Years, 1861-70.	Year 1874.	1874. Quarters ending June.	Sept.	Dec.	1875. Quarters ending March.	June.
England and Wales	22·4	22·3	21·0	20·8	23·8	27·5	21·9
I. London	24·3	22·5	19·9	20·6	26·2	27·2	21·9
II. South-Eastern counties	19·1	17·5	17·1	15·9	17·5	23·3	18·6
III. South Midland „	20·2	18·5	17·5	17·0	19·5	26·2	19·8
IV. Eastern counties	20·1	18·8	18·8	16·7	19·2	24·6	20·2
V. South-Western counties	19·9	18·9	18·8	16·6	18·8	26·0	20·1
VI. West Midland „	21·8	21·7	20·4	20·2	22·9	28·3	21·7
VII. North Midland „	20·8	21·3	19·6	20·6	23·3	27·3	21·8
VIII. North-Western „	26·3	27·3	25·7	26·5	29·6	31·4	24·6
IX. Yorkshire	24·0	24·3	22·5	23·8	27·6	28·1	23·7
X. Northern counties	22·7	25·6	24·2	25·2	26·7	27·3	22·3
XI. Monmouthshire and Wales	21·6	23·1	23·7	20·0	22·8	28·6	23·4

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1875-73.

	Area in Statute Acres.	Population Enumerated.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
		1871.		1875.	Mean '65-74.	1874.	1873.
In 131 Districts, and 59 Sub-districts, comprising the *Chief Towns*	3,183,965	12,892,982	March ..	28·9	26·6	25·2	24·4
			June	22·7	22·9	22·5	21·6
			Sept.	—	23·9	23·5	22·1
			Dec.	—	24·8	26·7	24·3
			Year	—	24·6	24·5	23·1
			Year	—	19·3	19·3	18·4
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,135,256	9,819,284	March ..	25·7	22·0	20·9	21·1
			June	20·8	19·4	19·1	18·7
			Sept.	—	17·3	17·2	15·9
			Dec.	—	18·6	19·9	17·9

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the Second Quarter of* 1875, *in* TWENTY-ONE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1875.	Births in 13 Weeks ending 3rd July, 1875.	Deaths in 13 Weeks ending 3rd July, 1875.	Annual Rate to 1,000 Living during the 13 Weeks ending 3rd July, 1875.		Mean Temperature in 13 Weeks ending 3rd July, 1875.	Rainfall in Inches in 13 Weeks ending 3rd July, 1875.
				Births.	Deaths.		
Total of 21 towns in U. K.	7,742,889	71,562	45,422	37·1	23·5	52·3	6·36
London	3,445,160	30,020	18,838	35·0	21·9	54·0	6·01
Portsmouth........................	122,632	1,003	527	32·8	17·3	—	—
Norwich	82,842	677	505	32·8	24·5	52·5	4·11
Bristol........................	196,186	1,793	1,179	36·7	24·1	52·0	10·12
Wolverhampton........................	71,718	677	379	37·9	21·2	53·0	7·47
Birmingham	366,325	3,741	2,243	41·0	24·6	52·4	6·45
Leicester........................	109,830	1,038	582	37·9	21·3	53·6	8·03
Nottingham	92,251	805	573	35·0	24·9	52·5	6·30
Liverpool........................	516,063	5,063	3,163	39·4	24·6	51·8	5·74
Manchester........................	356,626	3,508	2,493	39·5	28·1	—	—
Salford........................	135,720	1,549	907	45·8	26·8	51·7	8·31
Oldham	87,437	947	660	43·5	30·3	—	—
Bradford	168,305	1,678	1,046	40·0	24·9	52·1	6·07
Leeds	285,118	2,940	1,655	41·4	23·3	52·3	5·27
Sheffield	267,881	2,751	1,555	41·2	23·3	52·5	6·82
Hull........................	133,932	1,376	909	41·2	27·2	51·4	4·12
Sunderland........................	106,342	1,152	561	43·5	21·2	53·1	4·18
Newcastle-on-Tyne	137,665	1,346	778	39·2	22·7	—	—
Edinburgh	211,626	1,760	1,203	33·4	22·8	—	—
Glasgow	534,564	5,540	3,760	41·6	28·2	51·4	6·46
Dublin........................	314,666	2,198	1,906	28·0	24·3	52·7	5·05

F.—*Divisional Table:*—**Marriages** *Registered in Quarters ended* 31*st March,* 1875-73; *and* Births *and* Deaths *in Quarters ended* 30*th June,* 1875-73.

1 DIVISIONS. (England and Wales.)	2 Area* in Statute Acres.	3 Population, 1871. (*Persons.*)	4 Marriages in Quarters ended 31st March. 1875.	5 1874.	6 1873.
		No.	No.	No.	No.
Engld. & Wales....*Totals*	37,319,221	22,712,266	42,237	44,262	41,209
I. London	75,362	3,254,260	7,039	6,523	6,582
II. South-Eastern	3,994,431	2,167,726	3,235	2,971	2,965
III. South Midland	3,201,325	1,442,654	1,742	1,740	1,758
IV. Eastern	3,211,441	1,218,728	1,590	1,596	1,572
V. South-Western	4,981,170	1,880,777	2,799	2,823	2,784
VI. West Midland	3,945,460	2,720,669	4,702	4,763	4,948
VII. North Midland	3,535,445	1,406,935	2,465	2,404	2,296
VIII. North-Western	1,998,914	3,389,044	7,870	7,343	7,646
IX. Yorkshire	3,702,384	2,395,569	5,249	5,155	4,971
X. Northern	3,547,947	1,414,234	3,162	3,254	3,203
XI. Monmthsh. & Wales	5,125,342	1,421,670	2,384	2,845	2,484

7 DIVISIONS. (England and Wales.)	8 Births in Quarters ended 30th June. 1875.	9 1874.	10 1873.	11 Deaths in Quarters ended 30th June. 1875.	12 1874.	13 1873.
	No.	No.	No.	No.	No.	No.
Engld. & Wales....*Totals*	214,650	231,998	206,618	130,797	132,654	118,751
I. London	30,020	30,038	28,381	18,838	16,873	16,690
II. South-Eastern	17,369	17,757	16,535	10,740	9,722	9,259
III. South Midland	11,897	12,284	12,091	7,459	6,515	6,445
IV. Eastern	10,235	10,234	9,807	6,311	5,826	5,735
V. South-Western	13,996	14,451	14,655	9,538	8,907	8,584
VI. West Midland	26,025	26,831	25,804	15,384	14,339	13,771
VII. North Midland	13,457	13,637	12,952	7,951	7,081	7,198
VIII. North-Western	35,753	36,225	33,494	22,090	22,717	21,035
IX. Yorkshire	24,838	25,025	23,842	15,268	14,210	13,703
X. Northern	16,926	16,730	15,823	8,589	9,136	8,468
XI. Monmthsh. & Wales	14,134	14,893	13,234	8,621	8,664	7,863

* These are revised figures, and may be found to differ somewhat from those hitherto published.

G.—*General Meteorological Table, Quarter ended June,* 1875.

[Abstracted from the particulars supplied to the Registrar-General by James Glaisher, Esq., F.R.S., &c.]

1875 Months.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.				
	Mean.	Diff. from Average of 104 Years.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.		Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
April ...	46·3	+0·2	−0·9	42·5	−1·6	38·2	−2·5	20·1	+1·4	48·4	·232	−·023	2·7	−0·2
May ...	55·0	+2·5	+2·2	50·5	+1·5	46·0	+0·7	19·9	−0·6	58·6	·312	+·011	3·6	+0·1
June ...	58·9	+0·7	0·0	53·9	−0·7	49·5	−1·2	22·1	+1·0	62·2	·354	−·017	4·0	−0·1
Mean ...	53·4	+1·1	+0·4	49·0	−0·3	43·6	−1·0	20·7	+0·6	56·4	·299	−·010	3·4	−0·1

1875. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
										Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Amnt.	Diff. from Average of 60 Years.		At or below 30°.	Between 30° and 40°.	Above 40°.		
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
April ...	74	− 5	29·842	+ ·074	547	+ 4	1·6	−0·1	236	14	13	3	20·8	42·7
May ...	73	− 3	29·809	+ ·029	532	− 9	1·5	−0·6	272	1	18	12	29·3	46·8
June ...	71	− 3	29·743	− ·072	537	+ 5	2·3	+0·3	293	0	5	25	33·5	55·9
Mean ...	73	− 4	29·798	+ ·010	539	0	Sum 5·4	Sum −0·4	Mean 267	Sum 15	Sum 36	Sum 40	Lowest 20·8	Highest 55·9

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for April was 46°·3, being 0°·2 higher than the average of the preceding 104 years; and 0°·9 below the average of the preceding 34 years, it was 3°·7 lower than the value in the year 1874, and 0°·4 higher than in the year 1873.

The mean temperature of the air for May was 55°·0, being respectively 2°·5 and 2°·2 higher than the average of the preceding 104 years and 34 years; it was higher than the corresponding values in 1874 and 1873 by 4°·5 and 4°·4 respectively.

The mean temperature of June was 58°·9, being 0°·7 higher than the average of the preceding 104 years, and the same as the average of the preceding 34 years; it was 0°·9 higher than the value in 1874; and the same as in the year 1873.

The mean high day temperatures of the air were 0°·6 and 1°·6 lower than their respective averages in April and June, but 0°·2 higher in May.

The mean low night temperatures of the air were 0°·1, 6°·1, and 1°·8 higher than their respective averages in April, May, and June.

The mean daily ranges of temperature were 1°·4 and 1°·0 higher than thei respective averages in April and June, but 0°·6 lower in May.

H.—*Special Meteorological Table, Quarter ended* 30*th June*, 1875.

1	2	3	4	5	6	7	8	
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·692	70·5	38·5	32·0	25·2	10·9	51·1	89
Osborne	29·647	81·1	30·1	51·0	40·0	19·3	52·8	88
Barnstaple	29·661	80·0	35·0	45·0	37·5	15·4	54·8	76
Blackheath	29·658	81·8	30·0	51·8	39·6	16·7	53·7	81
Royston	29·711	84·9	27·8	57·1	47·0	23·7	52·9	74
Norwich	29·630	85·0	28·5	56·5	41·3	20·1	52·5	84
Llandudno	29·649	74·9	35·0	39·9	33·0	14·8	53·2	74
Liverpool	29·677	78·0	33·8	44·2	33·8	12·6	51·6	74
Stonyhurst	29·634	75·1	29·0	46·1	38·1	17·3	50·7	83
Bradford	29·655	74·4	32·3	42·1	35·0	14·8	51·7	74
North Shields	—	73·6	31·8	41·8	31·9	13·4	49·8	78

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			in.
Guernsey	1·3	8	6	7	9	8·9	37	5·04
Osborne	0·2	4	7	10	10	4·7	34	4·25
Barnstaple	1·3	4	6	10	10	4·3	44	8·78
Blackheath	1·0	5	7	8	11	5·6	34	5·13
Royston	—	6	4	10	10	5·5	33	6·20
Norwich	—	7	5	9	8	—	29	3·63
Llandudno	0·7	4	5	7	14	6·1	35	4·21
Liverpool	1·2	3	7	8	13	5·4	39	4·62
Stonyhurst	—	5	5	7	13	7·1	53	8·98
Bradford	1·0	4	6	6	14	6·5	30	4·15
North Shields	1·4	7	6	6	11	6·2	41	3·05

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 30TH JUNE, 1875.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1875-71 *inclusive.*

	1875.		1874.		1873.		1872.		1871.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47	28,902	3·43
Deaths........	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50	19,756	2·34
Marriages ..	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68	5,415	0·64
Mean Temperature	38°·7		40°·9		38°·1		40°·7		39°·1	
2nd Quarter—										
Births	32,294	3·70	32,295	3·73	31,283	3·64	30,726	3·61	30,583	3·63
Deaths........	19,518	2·23	19,640	2·27	19,931	2·32	19,045	2·24	18,715	2·22
Marriages ..	6,638	0·76	6,730	0·78	6,690	0·78	6,398	0·75	5,946	0·70
Mean Temperature	50°·73		49°·53		49°·2		49°·2		48°·7	
3rd Quarter—										
Births	—	—	30,702	3·55	28,975	3·38	29,181	3·43	28,689	3·40
Deaths........	—	—	18,099	2·09	17,072	1·99	16,692	1·96	16,835	2·00
Marriages ..	—	—	5,582	0·64	5,816	0·68	5,891	0·69	5,424	0·64
Mean Temperature	—		56°·03		55°·4		55°·8		56°·3	
4th Quarter—										
Births	—	—	30,961	3·58	29,270	3·41	29,460	3·46	27,953	3·32
Deaths........	—	—	22,162	2·54	18,411	2·15	18,759	2·20	19,338	2·29
Marriages ..	—	—	7,158	0·83	7,606	0·88	7,471	0·88	7,181	0·85
Mean Temperature	—		39°·5		42°·7		41°·8		41°·3	
Year—										
Population.	3,495,214		3,462,916		3,430,923		3,399,226		3,367,922	
Births	—	—	123,795	3·57	119,738	3·49	118,873	3·49	116,127	3·45
Deaths........	—	—	80,676	2·33	76,857	2·24	75,741	2·22	74,644	2·22
Marriages ..	—	—	26,247	0·76	26,730	0·76	25,580	0·75	23,966	0·71

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending* 30*th June*, 1875, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,860,018	3,495,214	32,294	3·70	27	2,658	8·2	12·2
Principal towns ...	1,079,211	1,171,228	11,467	3·92	25	1,002	8·7	11·5
Large "	318,740	343,640	3,818	4·44	22	255	6·7	14·9
Small " ...	767,487	796,597	7,640	3·84	26	557	7·3	13·7
Mainland rural ...	1,062,576	1,053,718	8,670	3·29	30	804	9·3	10·7
Insular "	132,004	130,031	699	2·15	46	40	5·7	17·5

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	19,518	2·23	45	6,638	0·76	132
Principal towns	1,079,211	1,171,228	7,474	2·55	89	2,753	0·94	106
Large "	318,740	343,640	2,337	2·72	37	770	0·90	111
Small "	767,487	796,597	4,247	2·13	47	1,403	0·70	143
Mainland rural	1,062,576	1,053,718	4,879	1·85	54	1,623	0·62	161
Insular "	182,004	130,031	581	1·79	56	89	0·27	370

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending* 30*th June*, 1875.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	8·2						
Northern	6·6	Shetland	1·9	Forfar	9·9	Lanark	6·9
		Orkney	10·2	Perth	9·8	Linlithgow .	7·7
North-Western	6·8	Caithness	7·9	Fife	8·2	Edinburgh .	7·3
North-Eastern	13·1	Sutherland....	4·7	Kinross	12·7	Haddington	6·0
		Ross and Cromarty	5·9	Clackmannan	7·6	Berwick	8·0
East Midland ..	9·3					Peebles........	11·2
West Midland.	6·3	Inverness	7·5	Stirling	6·1	Selkirk	5·8
		Nairn	10·0	Dumbarton ..	6·4	Roxburgh ..	9·3
South-Western	6·8	Elgin	14·9	Argyll	6·2	Dumfries	14·0
South-Eastern.	7·3	Banff	12·0	Bute	7·3	Kirkcudbright ..	14·4
		Aberdeen	13·3	Renfrew........	5·8		
Southern	12·9	Kincardine....	12·8	Ayr...............	7·3	Wigtown	14·2

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 30*th June*, 1875.

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1871. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	6,638	32,294	19,518
I. Northern	2,261,622	127,191	111	782	535
II. North-Western........	4,739,876	166,351	124	967	763
III. North-Eastern	2,429,594	393,199	666	3,436	1,689
IV. East Midland	2,790,492	559,676	1,059	4,985	2,832
V. West Midland	2,693,176	251,088	416	2,231	1,413
VI. South-Western........	1,462,397	1,183,218	2,822	13,941	8,576
VII. South-Eastern	1,192,524	475,523	1,071	4,298	2,564
VIII. Southern	2,069,696	203,772	369	1,654	1,146

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 31*st March*, 1875; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 30*th June*, 1875.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325,	22,712,	42,237	1·8	214,650	9·4	130,797	5·7
Scotland	19,639,	3,360,	6,638	1·9	32,294	9·6	19,518	5·8
Ireland	20,323,	5,412,	8,523	1·5	37,393	6·9	25,375	4·6
GREAT BRITAIN AND IRELAND	77,287,	31,484,	57,398	1·8	284,337	9·3	175,690	5·5

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. *S. J.*

rade of United Kingdom, 1875-74-73.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Six Months.					
	1875.		1874.		1873.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	10,909,	6,079,	13,897,	7,380,	13,142,	6,847,
Central Europe; viz., Germany, Holland, and Belgium	24,001,	20,443,	23,825,	21,548,	23,182,	25,974,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	31,958,	11,044,	29,803,	12,741,	30,138,	12,743,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	3,821,	4,362,	2,653,	4,660,	3,238,	5,349,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	8,254,	4,741,	8,958,	5,548,	11,242,	7,292,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	771,	231,	970,	285,	610,	222,
Western Africa	739,	375,	717,	441,	866,	588,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	282,	189,	236,	208,	104,	64,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	2,215,	1,455,	1,942,	849,	1,230,	650,
South Sea Islands	75,	14,	37,	20,	33,	14,
China, including **Hong Kong**	4,347,	5,753,	3,735,	5,095,	4,585,	3,714,
United States of America	39,277,	12,106,	43,346,	15,827,	40,249,	19,822,
Mexico and Central America	1,175,	718,	2,872,	507,	838,	635,
Foreign West Indies and Hayti	2,084,	1,536,	976,	1,202,	1,836,	2,094,
South America (Northern), New Granada, Venezuela, and Ecuador	632,	782,	631,	1,629,	782,	1,819,
" **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	4,530,	2,187,	5,506,	2,112,	4,951,	3,036,
" **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	5,721,	5,170,	5,166,	6,436,	5,712,	6,501,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	52,	—	33,	12,	34,	—
Total—Foreign Countries	140,843,	77,171,	145,303,	86,500,	142,182,	96,864,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	19,164,	18,308,	19,588,	18,642,	18,873,	12,489,
Austral. Cols.—N. So. W., Vict., and Queensld.	10,864,	6,618,	9,306,	5,771,	7,137,	5,689,
" " So. Aus., W. Aus., Tasm., and N. Zealand	4,985,	2,775,	4,886,	3,197,	4,143,	2,387,
British North America	1,392,	5,415,	1,484,	3,906,	1,557,	3,619,
" W. Indies with Btsh. Guiana & Honduras	3,945,	1,529,	3,245,	1,584,	3,075,	1,646,
Cape and Natal	2,248,	2,108,	1,993,	2,030,	1,863,	2,058,
Brt. W. Co. of Af., Ascension and St. Helena	272,	392,	267,	477,	162,	388,
Mauritius	550,	190,	692,	336,	998,	309,
Channel Islands	442,	337,	419,	388,	313,	343,
Total—British Possessions	43,862,	32,678,	41,880,	31,331,	38,747,	28,928,
General Total £	184,705,	109,843,	187,183,	117,831,	180,929,	125,787,

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* *i.e.*, British and Irish produce and manufactures.

Trade of United Kingdom, 1874-70. — *Value of the Total Exports of* **Foreign** *and* **Colonial** *Produce and Manufactures to each Foreign Country and British Possession.*

Merchandise Exported to the following Foreign Countries, &c. [000's omitted.]	Declared Value.				Computed Value.
	1874.	1873.	1872.	1871.	1870.
I.—FOREIGN COUNTRIES.	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland	5,116,	4,891,	4,638,	4,491,	4,597,
Central Europe; viz., Germany, Holland and Belgium	24,016,	24,301,	26,257,	25,683,	18,200,
Western Europe; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries)	14,560,	14,710,	12,673,	16,956,	11,351,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	2,105,	1,713,	1,888,	2,115,	1,624,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	668,	579,	737,	626,	573,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	93,	53,	39,	46,	45,
Western Africa	271,	288,	260,	199,	247,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	29,	—	—	2,	35,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	34,	14,	21,	21,	19,
South Sea Islands	—	—	—	2,	2,
China, including **Hong Kong**	441,	537,	657,	547,	554,
United States of America	3,996,	3,124,	5,171,	4,165,	2,971,
Mexico and Central America	216,	235,	102,	179,	167,
Foreign West Indies and Hayti	490,	30,	13,	315,	327,
South America (Northern), New Granada, Venezuela and Ecuador	45,	48,	49,	78,	71,
„ **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	262,	362,	693,	356,	185,
„ **(Atlantic)**, Brazil, Uruguay, and Buenos Ayres	512,	518,	484,	337,	287,
Other countries (unenumerated)	438,	57,	44,	78,	30,
Total—Foreign Countries	52,995,	51,460,	53,726,	56,646,	41,283,
II.—BRITISH POSSESSIONS:					
British India, Ceylon, and Singapore	1,437,	1,082,	1,176,	1,142,	909,
Austral. Cols.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zealand	1,606,	1,615,	1,341,	1,062,	837,
British North America	879,	754,	1,131,	855,	800,
„ W. Indies with Btsh. Guiana & Honduras	325,	324,	384,	382,	293,
Cape and Natal	400,	311,	288,	117,	104,
Brt. W. Co. of Af., Ascension and St. Helena	41,	79,	87,	94,	72,
Mauritius	69,	33,	30,	32,	17,
Channel Islands	99,	156,	155,	173,	158,
Other possessions	241,	16,	13,	6,	21,
Total—British Possessions	5,097,	4,370,	4,605,	3,863,	3,211,
General Total £	58,092,	55,830,	58,331,	60,509,	44,494,

IMPORTS.—(United Kingdom.)—**First Six Months** (*January—June*), 1875-74-73-72-71.—*Declared Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Six Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
RAW MATLS.-*Textile*,&c.	Cotton Wool	29,056,	31,094,	34,334,	35,691,	33,507,
	Wool (Sheep's)..	17,191,	14,764,	12,924,	13,136,	11,091,
	Silk*..................	7,443,	7,589,	6,400,	6,197,	6,902,
	Flax	1,748,	2,763,	2,566,	2,322,	1,819,
	Hemp	2,713,	3,211,	2,956,	3,545,	2,804,
	Indigo	1,445,	1,844,	209,	295,	250,
		59,596,	61,265,	59,389,	61,176,	56,373,
" " *Various.*	Hides	3,467,	3,092,	3,329,	3,186,	1,980,
	Oils	2,011,	1,596,	2,269,	2,297,	2,489,
	Metals	6,762,	5,577,	5,516,	5,944,	4,284,
	Tallow	990,	1,269,	1,309,	1,634,	1,346,
	Timber................	3,474,	6,997,	4,939,	3,666,	3,378,
		16,704,	18,531,	17,362,	16,731,	13,477,
" " *Agroltl.*	Guano	370,	1,128,	826,	575,	1,509,
	Seeds	4,138,	3,239,	2,889,	3,420,	3,420,
		4,508,	4,367,	3,715,	3,995,	4,929,
TROPICAL, &c., PRODUCE.	Tea	4,016,	3,009,	3,641,	5,825,	5,560,
	Coffee	4,874,	4,527,	4,029,	2,884,	2,363,
	Sugar & Molasses	11,870,	11,185,	9,942,	9,714,	9,273,
	Tobacco	1,314,	1,274,	1,520,	1,021,	1,387,
	Rice	812,	1,561,	1,301,	1,010,	657,
	Fruits	1,157,	987,	868,	1,059,	838,
	Wines	3,565,	3,684,	4,181,	4,003,	3,605,
	Spirits	1,564,	1,392,	1,555,	1,184,	1,558,
		29,172,	27,619,	27,037,	26,200,	25,241,
FOOD	Grain and Meal.	21,909,	25,700,	23,359,	19,977,	16,376,
	Provisions	13,487,	12,586,	11,798,	9,710,	8,343,
		35,396,	38,286,	35,157,	29,687,	24,719,
Remainder of Enumerated Articles		20,618,	19,142,	21,163,	19,438,	18,314,
TOTAL ENUMERATED IMPORTS		166,094,	169,210,	163,823,	157,227,	143,153,
Add for UNENUMERATED IMPORTS (say)		17,750,	17,376,	18,100,	18,311,	11,900,
TOTAL IMPORTS		183,844,	186,586,	181,923,	175,538,	155,053,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**First Six Months** (*January—June*), **1875-74-73-72-71.**—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(Six Months.) British Produce, &c., Exported.	[000's omitted.]	1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures ..	26,321,	26,948,	30,633,	30,207,	27,299,
	" Yarn	6,437,	7,250,	7,733,	7,992,	7,092,
	Woollen Manufactures	10,743,	11,063,	13,373,	15,986,	12,066,
	" Yarn	2,389,	2,484,	2,622,	3,403,	2,930,
	Silk Manufactures	842,	1,014,	916,	1,137,	976,
	" Yarn	416,	621,	914,	747,	634,
	Linen Manufactures	3,873,	3,767,	3,951,	4,305,	3,589,
	" Yarn	878,	865,	1,024,	1,042,	1,149,
		51,899,	54,012,	61,166,	64,819,	55,735,
" *Sewed.*	Apparel	1,501,	1,505,	1,629,	1,416,	1,300,
	Haberdy. and Mllnry.	2,638,	2,971,	3,161,	3,159,	2,767,
		4,139,	4,476,	4,790,	4,575,	4,067,
Metals, &c.	Hardware	2,089,	2,083,	2,428,	2,331,	1,716,
	Machinery	4,545,	4,656,	4,668,	3,512,	2,407,
	Iron	12,936,	15,786,	19,167,	16,007,	11,779,
	Copper and Brass........	1,806,	1,960,	1,842,	1,760,	1,402,
	Lead and Tin	594,	953,	682,	883,	760,
	Coals and Culm	4,348,	5,823,	6,411,	3,970,	2,736,
		26,318,	31,261,	35,198,	28,463,	20,800,
Ceramic Manufcts.	Earthenware and Glass	1,413,	1,369,	1,749,	1,454,	1,219,
Indigenous Mnfrs. and Products.	Beer and Ale...............	1,302,	1,452,	1,383,	1,178,	1,045,
	Butter	115,	120,	127,	143,	149,
	Cheese	39,	32,	36,	37,	48,
	Candles	82,	91,	96,	112,	87,
	Salt................................	325,	317,	360,	217,	232,
	Spirits	133,	81,	111,	98,	101,
	Soda	—	—	1,426,	1,146,	793,
		1,996,	2,093,	3,539,	2,931,	2,455,
Various Manufcts.	Books, Printed	399,	884,	388,	368,	296,
	Furniture	—	—	—	—	—
	Leather Manufactures	904,	1,635,	1,708,	1,764,	1,968,
	Soap	154,	125,	117,	149,	99,
	Plate and Watches	121,	508,	128,	81,	104,
	Stationery	326,	330,	317,	290,	221,
		1,904,	2,982,	2,658,	2,652,	2,688,
Remainder, Enumerated Articles		13,864,	13,388,	8,397,	7,660,	8,354,
Unenumerated Articles...........................		8,310,	8,250,	8,290,	7,049,	6,319,
Total Exports....................		109,843,	117,831,	125,787,	119,603,	101,637,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* **Six Months** *ended June,* 1875-74-73.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1875.		1874.		1873.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
FOREIGN COUNTRIES.						
Russia { Northern ports	214,572	282,152	350,304	391,344	225,816	318,229
Russia { Southern "	201,658	85,455	110,497	63,701	215,036	78,806
Sweden	199,929	261,628	458,253	300,920	341,359	278,378
Norway	341,553	171,520	480,280	148,713	468,765	132,974
Denmark	83,835	250,343	86,035	254,952	91,360	244,742
Germany	675,218	1,021,695	774,140	999,122	817,022	973,656
Holland	431,552	486,956	401,142	464,819	408,128	534,354
Belgium	419,958	472,819	407,604	403,350	424,182	458,773
France	929,991	1,302,114	788,604	1,160,055	868,134	1,221,418
Spain	347,363	284,567	428,321	272,973	509,104	296,465
Portugal	131,548	155,913	151,480	150,131	168,748	145,492
Italy	147,254	401,644	117,979	355,436	130,594	355,268
Austrian territories	23,060	42,436	15,084	45,553	11,209	54,200
Greece	62,376	39,138	56,877	30,114	38,041	38,594
Turkey (including Wallachia and Moldavia)	122,610	147,969	111,838	165,939	139,443	160,655
Egypt	145,898	203,031	151,199	257,819	239,895	282,353
United States of America	1,739,134	944,984	1,954,525	1,065,611	1,540,895	1,090,571
Mexico, Foreign West Indies, and Central America	146,363	216,367	179,032	206,884	121,625	204,630
Brazil	150,008	201,194	117,943	261,497	120,547	199,143
Peru	107,725	77,909	154,640	40,277	120,150	100,647
Chili	32,426	141,641	45,730	106,798	37,334	102,260
China	45,045	16,097	34,334	9,687	47,261	11,355
Other countries	280,472	289,391	272,180	307,639	240,617	305,865
Total, Foreign Countries	6,979,548	7,496,963	7,648,021	7,463,334	7,325,265	7,588,828
BRITISH POSSESSIONS.						
North American Colonies	149,809	312,480	147,815	370,469	168,003	305,577
East Indies, including Ceylon, Singapore, and Mauritius	473,461	608,882	471,186	553,962	446,611	511,530
Australia and New Zealand	167,302	285,228	169,357	277,055	138,553	219,162
West Indies	111,231	90,490	98,782	68,591	103,206	86,384
Channel Islands	121,602	78,755	122,772	76,200	122,412	80,598
Other possessions	106,391	356,383	105,441	406,780	103,125	376,757
Total, British Possessions	1,129,796	1,732,218	1,115,353	1,753,057	1,081,910	1,580,008
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Six months ended June, { 1875	8,109,344	9,229,181	—	—	—	—
Six months ended June, { '74	—	—	8,763,374	9,216,391	—	—
Six months ended June, { '73	—	—	—	—	8,407,175	9,168,836

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* **Six Months** (*January—June*), **1875-74-73.**

[000's omitted.]

(First Six Months.)	1875.		1874.		1873.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	2,675,	18,	2,874,	9,	4,656,	9,
So. Amca. and W. Indies	564,	1,994,	1,337,	2,024,	1,144,	1,589,
United States and Cal.	6,198,	1,293,	2,054,	2,047,	1,532,	3,648,
	9,437,	3,305,	6,265,	4,080,	7,332,	5,246,
France	1,011,	641,	232,	579,	269,	806,
Germany, Holl. & Belg.	495,	599,	161,	1,753,	15,	133,
Prtgl., Spain, and Gbrltr	44,	20,	27,	26,	41,	39,
Mlta., Trky., and Egypt	31,	15,	254,	12,	1,123,	29,
China	138,	55,	200,	159,	56,	94,
West Coast of Africa	61,	10,	44,	9,	40,	—
All other Countries	1,685,	285,	523,	617,	88,	223,
Totals Imported	12,902,	4,930,	7,706,	7,234,	8,964,	6,570,
Exported to:—						
France	3,268,	1,032,	2,102,	436,	381,	1,383,
Germany, Holl. & Belg.	2,101,	209,	932,	200,	5,392,	1,100,
Prtgl., Spain, and Gbrltr	796,	429,	48,	960,	2,903,	124,
	6,165,	1,670,	3,082,	1,596,	8,676,	2,607,
Ind. and China (viâ Egypt)	—	2,426,	542,	25,	808,	1,493,
Danish West Indies	—	—	—	—	—	—
United States	255,	86,	8,	2,	102,	2,
South Africa	—	—	4,	10,	187,	39,
Mauritius	—	—	—	—	—	—
Brazil	450,	—	244,	—	104,	—
All other Countries	969,	096,	1,981,	4,979,	1,372,	806,
Totals Exported	7,839,	4,278,	5,871,	6,612,	11,249,	4,947,
Excess of *Imports*	5,063,	652,	1,835,	622,	—	1,623,
" Exports	—	—	—	—	2,433,	—

REVENUE.—(UNITED KINGDOM.)—30TH JUNE, 1875-74-73-72.

Net Produce in QUARTERS *and* YEARS *ended* 30*th* JUNE, 1875-74-73-72.

[000's omitted.]

QUARTERS, ended 30th June.	1875.	1874.	1875.		Corresponding Quarters.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	4,687,	4,563,	—	124,	4,850,	4,944,
Excise	6,427,	6,330,	—	92,	6,287,	6,097,
Stamps	2,800,	2,714,	—	86,	2,645,	2,525,
Taxes	462,	413,	—	49,	362,	349,
Post Office	1,568,	1,350,	—	218,	1,180,	1,200,
Telegraph Service	300,	300,	—	—	100,	225,
	16,244,	15,670,	—	574,	15,424,	15,340,
Property Tax	778,	1,072,	294,	—	1,169,	1,604,
	17,022,	16,742,	294,	574,	16,593,	16,994,
Crown Lands	78,	78,	—	—	75,	75,
Miscellaneous	1,166,	853,	—	313,	1,013,	1,374,
Totals	18,266,	17,673,	294,	887,	17,681,	18,393,
			NET INCR. £593.			

YEARS, ended 30th June.	1875.	1874.	1875.		Corresponding Years.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	19,413,	20,052,	639,	—	20,939,	20,539,
Excise	27,492,	27,215,	—	277,	25,975,	23,961,
Stamps	10,626,	10,619,	—	7,	10,067,	9,920,
Taxes	2,489,	2,375,	—	114,	2,350,	2,395,
Post Office	5,888,	5,962,	74,	—	4,800,	4,750,
Telegraph Service	1,120,	1,410,	290,	—	890,	810,
	67,028,	67,633,	1,003,	398,	65,021,	62,375,
Property Tax	4,012,	5,594,	1,582,	—	7,065,	9,821,
	71,040,	73,227,	2,585,	398,	72,086,	72,196,
Crown Lands	385,	378,	—	7,	375,	375,
Miscellaneous	4,091,	3,722,	—	369,	3,435,	3,695,
Totals	75,516,	77,327,	2,585,	774,	75,896,	76,266.
			NET DECR. £1,811.			

REVENUE.—United Kingdom.—Quarter ended 30th June, 1875:—

An Account showing the Revenue *and other* Receipts *in the* Quarter *ended* 30*th June,* 1875; *the* Issues *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 30*th of June,* 1875, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		18,266,662
Amount received in Repayment of Advances for Public Works, &c.		350,345
Total		£18,617,007
Excess of the sums charged on the Consolidated Fund on the 30th of June, 1875, payable in September quarter, 1875, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£2,868,402	
Surplus over Charge in Ireland	459,664	
Net deficiency		*2,408,738
		21,025,745

Paid:—

		£
Net Deficiency of the Balance in the Exchequer to meet the charge on the 31st of March, 1875, as per last account		824,693
Amount applied out of the Income to *Supply Services*		12,120,262
Charge of the *Consolidated Fund* on the 30th of June, 1875, viz.:—		
Permanent Charge of Debt	£6,814,004	
Principal of Exchequer Bills	17,800	
The Civil List	102,199	
Other Charges on Consolidated Fund	299,987	
Advances for Public Works, &c.	847,800	
		8,080,790
Total		£21,025,745

* Charge on 30th June, 1875 (as above)	£8,080,790
Paid out of Growing Produce in June quarter, 1875	1,034,326
Portion of the Charge payable in September quarter, 1875	7,046,464
To meet which there was in the Exchequer on the 30th of June, 1875	4,637,726
Net deficiency as above	2,408,788

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES), *Second Quarter of* 1875.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1875.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
April 3	42	5	41	3	30	3
„ 10	43	1	40	8	29	6
„ 17	43	4	40	6	30	–
„ 24	43	4	41	1	29	9
Average for April	43	–	40	10	29	10
May 1	42	10	38	10	30	–
„ 8	42	8	39	–	30	–
„ 15	42	2	37	4	30	7
„ 22	42	–	38	3	31	3
„ 29	41	10	38	8	29	7
Average for May	42	3	38	5	30	3
June 5	41	11	36	9	30	7
„ 12	41	11	34	11	32	11
„ 19	42	3	39	6	30	8
„ 26	42	11	32	3	31	10
Average for June	42	3	35	10	31	6
Average for the quarter	42	6	38	4	30	6

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* Second Quarter (*April—June*) *of* **1875.**

[0,000's omitted.]

1	2	3	4	5	6	7
Issue Department.					Collateral Columns.	
Liabilities.		Assets.				
Notes Issued.	Dates. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1875. Per cent.
35,00	April 7	11,02	3,98	20,00	27,16	18 Feb. 3½
35,17	„ 14	11,02	3,98	20,30	27,11	
35,30	„ 21	11,02	3,98	20,30	26,93	
35,24	„ 28	11,02	3,98	20,24	26,84	
35,30	May 5	11,02	3,98	20,30	27,57	
35,33	„ 12	11,02	3,98	20,33	27,34	
35,43	„ 19	11,02	3,98	20,43	27,08	
36,43	„ 26	11,02	3,98	21,43	26,85	
36,82	June 2	11,02	3,98	21,82	37,41	
37,06	„ 9	11,02	3,98	22,00	26,87	
38,08	„ 16	11,02	3,98	23,08	27,46	
39,35	„ 23	11,02	3,98	24,35	27,08	

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.						Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.				Securities.		Reserve.		
Capital.	Rest.	Public.	Private.	Seven Day and other Bills.	Dates. (Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns	£ Mlns.	£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,10	5,16	18,88	,36	April 7	13,59	19,76	7,84	,85	42,05
14,55	3,11	4,63	18,02	,37	„ 14	13,59	18,29	8,06	,73	40,68
14,55	3,11	4,93	17,67	,34	„ 21	13,59	17,89	8,37	,76	40,61
14,55	3,12	5,49	17,71	,30	„ 28	13,59	18,40	8,40	,78	41,17
14,55	3,11	5,71	17,21	,33	May 5	13,59	18,92	7,73	,67	40.91
14,55	3,12	5,56	17,99	,36	„ 12	13,59	19,19	7,99	,81	41,58
14,55	3,12	5,44	17,03	,32	„ 19	13,59	17,72	8,35	,81	40,46
14,55	3,13	5,53	19,44	,34	„ 26	13,59	19,06	9,58	,77	42,99
14,55	3,09	6,03	21,63	,35	June 2	13,59	21,98	9,41	,67	45,64
14,55	3,09	6,81	20,67	,35	„ 9	13,72	20,10	10,19	,87	44,88
14,55	3,10	6,95	19,55	,33	„ 16	13,75	18,33	11,62	,77	44,47
14,55	3,11	7,20	22,85	,30	„ 23	13,75	21,19	12,27	,79	48,01

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in England *and* Wales *on Saturday in each Week during the* Second Quarter *(April —June) of* 1875; *and in* Scotland *and* Ireland, *at the Three Dates, as under.*

[0,000's omitted.]

England and Wales.					Scotland.				Ireland.		
Dates. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,89).	Joint Stock Banks. (Fixed Issues, 2,65).	Total. (Fixed Issues, 6,63).	Weeks ended	£5 and upwards.	Under £5.	Total. (Fixed Issues, 2,76).	£5 and upwards	Under £5.	Total. (Fixed Issues, 6,35).
1875.	£	£	£	£	1875.	£	£	£	£	£	£
April 3	120,31	2,56	2,40	4,96							
„ 10	94,00	2,59	2,40	4,99							
„ 17	140,95	2,57	2,38	4,95	April 17	1,83	3,70	5,53	3,70	3,11	6,81
„ 24	64,82	2,55	2,39	4,94							
May 1	139,87	2,55	2,40	4,95							
„ 8	94,05	2,55	2,42	4,97							
„ 15	119,50	2,55	2,40	4,95	May 15	2,15	3,94	6,09	3,80	3,04	6,84
„ 22	91,30	2,54	2,37	4,91							
„ 29	114,05	2,49	2,31	4,80							
June 5	92,95	2,45	2,28	4,73							
„ 12	125,40	2,40	2,25	4,65	June 12	2,37	4,25	6,62	3,73	2,99	6,72
„ 19	95,77	2,39	2,24	4,63							
„ 26	107,25	2,39	2,23	4,62							

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* London *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* London.

1	2	3	4	5	6	7	8	9
				Calcutta.				
Dates.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	India Council.* 60 d. s.	At Calcutta on London. 6 m. d.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1875.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
April 9	25·52½	20·84	4·86½	21⅞	22 7/16	50⅜	1pm. ¼dis	57⅜
„ 24	25·50	20·84	4·87½	21⅝	22 7/16	50⅜	„	57 5/16
May 8	25·52½	20·84	4·87	21⅜	22⅛	50⅜	1pm. ¼dis	57
„ 22	25·52½	20·84	4·87½	20 11/16	21 7/16	50⅜	„	56¾
June 5	25·55	20·88	4·87½	21 7/16	22	—	1pm. ¼dis	57
„ 19	25·60	20·88	4·88	21 7/16	22⅛	50⅜	„	55⅜

* Bankers' drafts.

ADDITIONS TO THE LIBRARY DURING THE QUARTER ENDED 30TH SEPTEMBER, 1875.

Donations.	By whom Presented.
Manual of the Railroads of the United States, 1874-75. By H. V. Poor, Esq. 820 pp,, cloth, map, 8vo. New York, 1875	The Author
Proceedings of the Royal Society of Edinburgh. Session 1869-70, Vol. vii, No. 80. 230 pp., diagrams, 8vo. Edinburgh, 1870	The Society
The Western: A Journal of Literature, Education, and Art. Vol. i, No. 6, 7, & 8, pp., 8vo. St. Louis, Mo. 1875	The Editor
Universal Conscription: the only Answer to the Recruiting Question. By Captain H. W. L. Hime, R.A., F.S.S. 40 pp., diagrams, 8vo. London, 1875	The Author
Astronomical and Meteorological Observations of U.S. Naval Observatory, 1872. 371 pp., cloth, folio. Washington, 1874	Rear-Admiral C. W. Davis, Superintendent U.S. Navy
Annual Report of the Board of Regents of the Smithsonian Institution, 1873. 452 pp., cloth, diagrams, 8vo. Washington, 1874	The Institution
Congressional Directory; compiled for the use of Congress. 158 pp., diagram and plate, 8vo. Washington, 1875	Smithsonian Institution
First and Second Annual Reports of the Board of Directors of the Chicago Public Library. 8vo. Chicago, 1873	The Library
An Essay concerning Important Physical Features in the Valley of the Minnesota River. By General G. K. Warren, U.S.A. 22 pp., maps, diagrams, &c., 8vo. Washington, 1874	Smithsonian Institution
Proceedings of the American Philosophical Society of Philadelphia. Vol. xiv, No. 93. 300 pp., map, 8vo. Philadelphia, 1874	The Society
Report of the Board of Public Charities of the State of Pennsylvania, 1874. 467 pp., cloth, 8vo. Philadelphia, 1875	The Board
Statistical Tables of the Dublin Metropolitan Police for the Year 1874. 64 pp., folio. Dublin, 1875	The Commissioner of Police
The Harveian Oration, 1875. By W. A. Guy, Esq., M.B., F.R.S. 56 pp., cloth, 8vo. London, 1875	The Author
Catalogue of the London Library, 1875. 4th Edition. 1022 pp., cloth, 4to. London, 1875	The London Library
Zeitschrift des Königlich Preussischen Statistischen Bureaus. Redigirt von Dr. Ernst Engel. 15 Jahrgang, 1875, Heft i. 148 pp., paper, 8vo. Berlin, 1875	Dr. Engel
Geburten, Sterbefälle und Trauungen in der Schweiz, im Jahr, 1872. 101 pp., paper. Bern, 1875	Bureau Fédéral de Statistique Berne
Handel der Schweiz mit dem Königreich Italien. 87 pp., paper. Bern, 1875	"
Rassegna Settimanale del Movimento della Popolazione e dello stato Civile del Comu ne di Firenze. Sheets. Paper	"
Resultati del Censimento Italiano esequito nel 1871 di G. J. Piantanida. 28 pp., paper. Roma, 1875	Giunta Centrale di Statistica, Roma
Zeitschrift für Schweizerische Statistik, 11 Jahrgang 1875. 1 quartal Heft. 64 pp., paper. Bern, 1875	Statistisches Bureau Bern
Zeitschrift des K. Sächsischen Statistischen Bureaus, xx Jahrgang. Heft iv, Nos. 10 to 12. 200 pp., paper, 8vo. Dresden, 1875	Statistisches Bureau des König. Sächs. Ministerium des Innern

Donations—Contd.

Donations.	By whom Presented.
Die wirthschaftlichen Zustände Smyrna's im Jahre 1874. Amtlicher Bericht von Dr. Karl von Scherzer. 16 pp., paper. Wien, 1875	Dr. Karl von Scherzer
Movimento dello Stato Civile de Regno. Introduzione al Volume dell'Anno 1873. 47 pp., paper. Roma, 1875	Il Ministero de Agricoltura, Industria, e Commercio
La Statistica Mortuaria applicata All'Igiene Publica, per Cesare Contini. 197 pp., paper. Roma, 1872	The Author
Manuale D'Igiene Popolare per uso delle seu Elementari e degl' Instituti de Educazione. Per Cescare Contini. 300 pp., paper. Roma	,,
Statistische Monatschrift. Herausgegeben vom Bureau der K.K. Statistischen Central-Commission. 248 pp., paper, 8vo. Wien, 1875	Dr. Adolf Ficker
Statistisches Jahrbuch; für das Jahr, 1874. Herausgegeben von der K. K. Statischen Central-Commission. Heft i. 89 pp., paper, 8vo. Wien, 1875	K. K. Statistische Central-Commission, Wien
Statistische Jahrbücher für das Jahr, 1873. Hefte ii, v, vii, ix. 51, 108, 220, 24 pp., paper, 8vo. Wien, 1875	,,
Relazione Statistica sulla Amministrazione della Giustizia nel Regno D'Italia per l'anno 1871. Affari Civili e Commerciali. 125 pp., paper, 4to. Roma, 1874	Il Ministero di Agricoltura, Industria e Commercio, Roma
Annali del Ministero di Agricoltura, Industria, e Commercio. Relazione Canevari. Vol lxxi. 539 pp., paper, charts, 8vo. Roma, 1874	,,
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Kalender und Statistisches Jahrbuch für das Königreich Sachsen, nebst Marktverzeichnissen für Sachsen and Thüringen auf das Jahr, 1876. Paper, 4to. Dresden, 1876	Statistisches Bureau des Königl. Ministerium des Innern, Dresden
Rapport sur les recettes et les dépenses de l'Exercise de 1876. Par M. Wolowski. Paper. Paris, 1875	The Author
Discours prononcé à la Seánce Publique Annuelle de la Société Centrale d'Agriculture de France. Par M. Wolowski. 12 pp., paper, 8vo. Paris, 1875	,,
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Notizie per la Storia dei prezzi per Leonida Sampieri. 56 pp., paper, 8vo. Roma, 1874	,,
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The Mauritius Almanack and Colonial Register for 1875. 275 pp., 8vo. Mauritius, 1875	H.E. The Governor of the Mauritius
Report of the Commissioners appointed by the State of Massachusetts to consider and report on the subject of Local Taxation. 577 pp., 8vo. Boston, 1875	The Hon. D. A. Wells

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Sixth Annual Report of the Massachusetts Bureau of Statistics of Labour. 503 pp., cloth, 8vo. Boston, 1875	The Hon. D. A. Wells.
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Report of the Tax Commissioner of Massachusetts for 1874. 167 pp., 8vo. Boston, 1875	”
Eleventh Annual Report of the Board of State Charities of Massachusetts, 1873-74. 292 pp., cloth, 8vo. Boston, 1875	”
Protection and Free Trade. By Isaac Butts, Esq. 190 pp., bevelled cloth, plate, 8vo. New York, 1875	The Widow of the Author, per the Hon. D. A. Wells
Transactions and Proceedings of the Royal Society of Victoria. Vol. xi. 55 pp., 8vo. Melbourne, 1874	The Society
Annual Report of the Trustees of the Astor Library of the City of New York. 62 pp., 8vo. Albany, 1875	The Library
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Parliamentary Papers—	Secretary of State for India
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” 244. Army Staff Appointments	
” 258. East India (Artillery Officers' Memorials)	
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” 318. Visit of H R.H. The Prince of Wales to India	
” 329. Civil Service Estimates, 1875-76	
” 159. Army	
” 2 to 5. East India (Baroda)	
” 214. British Merchant Shipping	
” 254. Oudh and Kirwee	
” C, 1272. East India (Baroda, No. 7)	
” 242. Army (Regimental Exchanges)	
” 339. ” (Recruits)	
” 357. East India (Army)	
” 350. ” Opium Revenue	
” C, 1,282. Consular, No. 2, 1875. Coolie Immigration	
Memoirs of the Life of Admiral Sir E. Codrington. 2 vols. Edited by Lady J. Bourchier. Maps, plates, 8vo. London, 1873	Lady Bourchier
Report of the Forty-fourth Meeting of the British Association for the Advancement of Science at Belfast, 1874. 266 pp., cloth, plates, 8vo. London, 1875	The Association

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A Report on the Hygiene of the United States Army. 567 pp., maps, plates, &c., 4to. Washington, 1875	C. H. Crane, Assist. Surgeon - General, U.S.A.
Census of Ireland, 1871— Nos. 4, 5, 6, 7, of vol. ii „ 1—10 of vol. iii (complete) „ 1—6, of vol. iv (complete) Part I, Summary Tables for Ireland	J. T. Hammick, Esq.
Parliamentary Papers— Judicial Statistics (Parts I and II), England and Wales, 1861 Criminal and Judicial Statistics (Parts I and II), Ireland, 1871 and 1873	„
Annual Statements of the Trade of the United Kingdom with Foreign Countries, for the Years 1872 and 1873	„
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Fourth Report of the Royal Commission on Historical Manuscripts, 1874. Parts I and II	„
Local Taxation (Ireland) Returns, for the Year, 1872	„
A Summary of the Population of London, with a Statistical Chart of the Marriages, Births, and Deaths for twelve Years, from 1839. By C. A. Cocke. Sheet, with coloured diagrams. 1852	„
Introduction to the Statistical Tables of the principal Empires, &c., in Europe. 36 pp., tables in sheets, 4to. London, 1789	„
Statistical Abstracts of the United Kingdom, 1840 to 1854, and 1855 to 1869. 8vo.	„
The Thirty-second Annual Report of the Deputy-Keeper of the Public Records. Vol. ii. 1062 pp. (Blue Book), 8vo. 1871	„
Report of the Commissioners appointed to inquire into the Sanitary State of the Army in India. 581 pp., maps, diagrams, &c., 8vo. 1864	„
Statistica d'Italia. Popolazione Censimento Generale, 31 Dec., 1861. Parte I. 236 pp., 8vo. Firenze, 1867	„
Journal of the Royal United Service Institution. Vol. xix, Nos. 80 and 81. Coloured plates, &c., 8vo. London, 1875	The Institution
Eleventh Annual Report of the Board of State Charities of Massachusetts, 1873-74. 292 pp., cloth, 8vo. Boston, 1875	The Board
The Foreign Office List and Diplomatic and Consular Handbook. 307 pp., cloth, maps, 8vo. London, 1875	Messrs. Harrison
Treaties, &c., regulating the Trade between Great Britain and Turkey. 193 pp., cloth. London, 1875	Messrs. Harrison & Sons, St. Martin's Lane
Zeitschrift für Schweizerische Statistik, 11 Jahrgang, 1875. 2 quartal Heft. 95 pp., paper, 4to. Berne, 1875	Bureau fédéral de Statistique, Berne
Nationalökonomisk Tidsskrift, Maanedsskrift for Samfundsspørgsmaal, O Konomi og Handel. Udgivet af N. C. Frederiksen, V. Falbe Hansen og Will. Sharling. Bind. i, ii, iii, iv. 476, 476, 476, 476 pp., 8vo. Copenhagen, 1873-74	Societé d'economic Politique de Copenhagen

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Zeitschrift des Königlich Preussischen Statistischen Bureau. 15 Jahrgang, 1875. Heft ii (April to Juni). 25 pp., paper, 4to. Berlin, 1875	Dr. E. Engel, Berlin
Statistical Register of the Colony of Victoria, for 1874. Parts 1, 2, and 3. Folio. 1875	The Government Statist
Report of the Conference of Government Statists, held in Tasmania, January, 1875. Folio. 1875	"
Statistics of the Colony of Queensland, for the Year 1873. 176 pp., boards, folio. Brisbane, 1875	The Registrar-General of Queensland
Results of a Census of the Colony of New Zealand, 1874 (2 copies). 288 pp., folio. Wellington, 1875	The Registrar-General of New Zealand
Seventeenth detailed Annual Report of Births, Marriages, and Deaths in Scotland. 251 pp., royal 8vo. Edinburgh, 1875	The Registrar-General of Scotland
Proceedings of the Philosophical Society of Glasgow, 1874-75. Vol. ix, No. 2. 221 pp., plates, &c., 8vo. Glasgow, 1875	The Society
Annual Report on the Sanitary Condition of Sheffield during 1874. 31 pp, 8vo. Sheffield, 1875	The Medical Officer of Health
Statistical Abstract for the United Kingdom in each of the last Fifteen Years from 1860 to 1874. No. 22, 129 pp, 8vo. London, 1875	The Board of Trade
Forty Years Since, and Now. By H. B. T. Strangways, Esq. An Address delivered before the Royal Colonial Institute. (Four copies.) 14 pp., 8vo. London, 1875	The Author
Returns of Deaths in the City of Glasgow during 1874. Two large lithographed folio sheets. 1875	Sanitary Department, Glasgow
The Athenæum. Parts 569, 570, and 571. 4to. London, 1875	The Editor
Revue Bibliographique Universelle. Partie Litteraire, No. 6 of vol. xiii, Nos. 1 and 2 of vol. xiv. Partie Technique, Nos. 6, 7, 8 of vol. xv.	"
Journal of the Franklin Institute. Nos. 5, 6, vol. lxix; No. 1, vol. lxx, 8vo. Philadelphia, 1875	The Institute
The Banker's Magazine. Nos. 376, 377, and 378. 8vo. London, 1875	The Editor
Transactions of the Institution of Surveyors. Part 13, vol. vii, 8vo. London, 1875	The Institution
Proceedings of the Royal Geographical Society. Nos. 6 and 7, vol. xix, 8vo. London, 1875	The Society
Proceedings of the Royal Medical Chirurgical Society. No. 8, vol. vii, 8vo. London, 1875	"
Italian Meteorological Returns for November and December, 1874, 4to. Rome, 1874	Professor Luigi Bodio
Bollettino delle Situazioni Menselli dei Conti. Nos. 8 to 12 for 1874, and Nos. 3, 4, 5, and 6 for 1875, folio. Rome, 1875	Il Ministro di Agricoltura, Indus, e Commercio

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Sessional Proceedings of the National Association for the Promotion of Social Science. Nos. 11 and 12 of vol. viii, 8vo. London 1875	The Association
Returns (Quarterly) of Births, Deaths, and Marriages in Scotland. No. 82, royal 8vo. Edinburgh, 1875	Registrar-General of Scotland
New York Banker's Magazine and Statistical Register. No. 22 of vol. ix; Nos. 1 and 2, vol. x, 8vo. New York, 1875	The Editor
The Friend of India. Current numbers. Calcutta, 1875	"
Proceedings of the Asiatic Society of Bengal. No. 10, 1874; Nos. 1 to 5, 1875, 8vo. Calcutta, 1875	The Society
Journal of the Asiatic Society of Bengal. Parts 1, 2, No. 4, 1874; Part 1, No. 1, 1875, 8vo. Calcutta, 1875	"
Quarterly Returns of Births, Deaths, and Marriages in Ireland. Nos. 44, 45, and 46, royal 8vo. Dublin, 1875	Registrar-General of Ireland
The Review. (The current weekly numbers)	The Editor
Journal of the Society of Arts. (The current weekly numbers)	The Society
The Insurance Record. (The current weekly numbers)	The Editor
Nature. (The current weekly numbers)	"
Coming Events. (The current weekly numbers)	"
Monetary and Mining Gazette. (The current weekly numbers)	"

Purchased.

Journal des Economistes. Nos. 114, 115, and 116. June, July, and August, 1875.

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Investor's Monthly Manual (current monthly numbers).

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Judicial Statistics, 1873, England and Wales. Parts 1 and 2 (c 1055).

A Synopsis of the Prices of Wheat, and of Circumstances Affecting Them, from the Commencement of the Thirteenth Century to the end of 1822. By Rear-Admiral Rainier, F.R.S. 10 pp., diagrams, &c., folio. London, 1875.

Vol. XXXVIII.] [Part IV.

JOURNAL OF THE STATISTICAL SOCIETY,

DECEMBER, 1875.

The INAUGURAL ADDRESS *of* JAMES HEYWOOD, ESQ., M.A., F.R.S., *President of the Statistical Society, delivered on Tuesday, the* 16*th November*, 1875.

FOR the commodious premises occupied by the Statistical Society, thanks are especially due to my excellent predecessor, Dr. Guy, F.R.S., whose professional position in King's College has aided with his powers of negotiation to obtain the settlement of the Society in its new home.

Somerset House Terrace, where we now assemble, is situated about half-way on the line between the Houses of Parliament and the Guildhall, and if important public bodies may be estimated by their libraries, we find at the western extremity of the line the splendid and admirably arranged collection of books belonging to the House of Commons, and the library of its elder sister, the House of Lords.

Moving eastwards, we meet with the special libraries of each department of Government, in Whitehall, Downing Street, and Somerset House. The medical profession has libraries in the College of Physicians, the College of Surgeons, Apothecaries' Hall, and the Medical Department of King's College.

Following the line already mentioned, the lawyers rejoice in the beautiful collections of legal works connected with the courts of law, as well as those of the Inner Temple, the Middle Temple, Lincoln's Inn, and the Law Institution.

A complete set of patents for inventions is preserved in the library of the Society of Arts, free of charge to any one desirous to consult it. The Society for the Amendment of the Law has been amalgamated with the Social Science Association, and the two united societies have a useful library.

At the eastern extremity of the line, in the city, the Lord Mayor and Common Council have, for a long time, devoted 300*l.* a-year towards the formation of a library in Guildhall, and recently this magnificent collection has been formed into a free public library, open to any one desirous of reading during the principal hours of the day. On visiting the institution, I asked the librarian at what hour the greatest number of readers usually frequented the library, and in reply I was informed that the luncheon hour, 1 o'clock, was the favourite time of resort for the consultation of books.

There are two small free public libraries in the metropolis—one in Little Smith Street, near Victoria Street, Westminster, and the other at 106, High Street, Notting Hill, and books are allowed to be taken from the library in each of these localities on the borrower depositing a certificate, signed by two ratepayers, that they will be responsible for the value of the book borrowed. This regulation only relates to volumes of moderate pecuniary value, such as Dickens's and Thackeray's works, and the privilege of borrowing is highly appreciated and adds to the popularity of each institution.

The library of the Statistical Society has been an interest to the Council and members for forty-one years, and so much has the collection of books increased, that the large space available in the new premises has been requisite to afford adequate accommodation for the Society's literary treasures. Constant additions arrive of scientific proceedings of contemporary societies, in return for which we present to those learned bodies the quarterly numbers of the Society's *Journal*.

Friendly relations between the International Statistical Congress and this Society have led to the presentation of numerous important foreign statistical works well calculated to assist in the carrying out of a plan of uniformity in the statistical tables of different countries.

Dr. Ficker, President of the Viennese Central Statistical Commission, forwards Austrian volumes of beauty and interest. Hungary supplies her statistics from Buda-Pesth. Dr. Engel, who at Berlin is at the head of German statistics, sends Prussian tables of great variety. The statistical office of the Minister of the Interior in Saxony furnishes details of their small and highly civilised kingdom.

From Italy the Minister at Rome of Agriculture, Industry, and Commerce, sends statistics of laws, trade, and navigation, and an Italian correspondent has kindly sent to us a work on popular hygiène for schools.

From Switzerland, M. Krummer, of the Federal Statistical Office at Berne, forwards details of the number of Swiss births, deaths, and marriages, and an account of the trade between Switzerland and Italy.

Denmark and Norway are well represented in our library. Statistics of Russia, Belgium, the Netherlands, France, and other European states are added.

From the United States the Hon. D. A. Wells forwards several important reports, and the Smithsonian Institution at Washington presents to the Society the "Congressional Directory," and the Smithsonian publications.

The Secretary of State for India has recently presented numerous works on Indian moral and material progress. The visit of His Royal Highness the Prince of Wales to India will tend to render information popular respecting that vast dependency on the British Crown, and the mission of Sir Louis Mallet to Bombay may serve to maintain free commercial intercourse between the United Kingdom and the Indian empire.

Among the British colonies, Australasia possesses several of her own Government statists, who meet together from their respective colonies, and agree upon uniform plans for statistical tables.

Our library contains the recent censuses of New Zealand and Victoria, and the statistics of New South Wales, New Zealand, Queensland, South Australia, Victoria, and Tasmania.

In March, 1874, a paper was read to the Statistical Society by Mr. Nathaniel Cork, F.R.G.S., on Australasian Banking, from which it appears that the banks of the several Australasian colonies are of so much interest to this country, that, according to Mr. Hamilton, Chairman of the Bank of Australasia, 12½ per cent. of the banking resources of Australia are held in the United Kingdom. Mr. Cork is of opinion that 70 millions sterling of British capital are invested in the stocks of the Australasian Government in business and squatting properties, in banks, mines, and numerous other Australasian public companies, and that the annual payment, at 6 per cent., on this amount would be 4,200,000*l.* for interest.

The "Mauritius Almanac," sent to the Society by his Excellency the Governor, conveys information relating to that large colony.

Coming nearer home, we possess several successive censuses of Ireland and numerous statistical accounts of the "green island."

Mr. S. K. Stephenson, registrar, sends a report on Friendly Societies and Trades Unions.

Mr. T. H. Farrer contributes a treatise on the progress of British merchant shipping. Mr. R. Valpy, of the Statistical and Commercial Department of the Board of Trade, presents to the Society the statistical abstract for the United Kingdom, comprising revenue, local taxation, customs and excise, national debt, income tax, imports and exports, bullion and the Bank of England, coinage, savings banks, the post office, &c.

A report from the Army Medical Department gives ample information on the health of the troops, and the "Journal of the "Royal United Service Institution" mentions numerous improvements in the art of warfare.

The report of the Registrar-General, published in 1874, on births, deaths, and marriages, informs us that in 1872 there were in the British army, at home and abroad, 192,007 men, and in the British navy, 40,830 men.

In the mercantile marine of 1872, there were, exclusive of masters of ships, 203,720 mariners, and of that number there had been 2,297 deaths referred to drowning, either by accident or by wreck, whilst in the royal navy there had been only 67 deaths by drowning, or 1·4 per 1,000; the proportion in the mercantile marine being 11·3 per 1,000 of deaths from disasters at sea.

Several interesting facts of foreign statistics, relating to the practical effect of the late Franco-German war, are given in the report of the Registrar-General. A considerable portion of the loss of population to France between the censuses of 1866 and 1872 was due to the transfer of the territories of Alsace and Lorraine to the Empire of Germany; but when due allowance had been made for that diminution, there remained a further decrease of French population in those six years, amounting to 491,000 persons, or 1·29 per cent. on the total population, and although two causes should be considered, the epidemic of the smallpox which raged in 1870-71, and a decrease in the same years in the number of marriages, and consequently in the number of births, there must have been a very large loss of life in France directly connected with the Franco-German war.

Statistics of recent foreign emigration are given in the Registrar-General's reports, and as most of the foreign emigrants leaving ports of the United Kingdom on their way to the United States or Canada, are Germans, Norwegians, and Swedes, it is interesting to notice the numbers, which in 1870, the first year of the Franco-German war, were 48,396 foreign emigrants, in 1871, 53,246, and in 1872, after the war was over, 79,025 from British ports. Conscription and high taxation to maintain a vast army may have occasioned in Germany this increased desire for emigration by which North America is manifestly so much benefitted.

Mr. Hammick has contributed numerous Parliamentary publications on statistics, a list of which will be found in the donations to the library at the end of the *Journal of the Statistical Society*.

Dr. Mouat, the editor of the *Journal*, devotes a large part of each number to important summaries of statistics, referring to topics of the day—such as railroads, the wheat crop of the present year, pauperism, marine losses, and details on Belgium and Canada; and he also gives periodical returns of the Register Office, of trade, shipping, bullion, and revenue.

It is interesting to remember that a report on the discussion following the reading of each paper presented to the Society is published in the *Journal*.

During the last year, the Statistical Society has lost by death twelve members, of whom Sir James Ranald Martin, C.B., F.R.S., was the author of an official report on the medical topography and climate of Calcutta; General John Briggs, F.R.S. and F.G.S., had been long a resident in India, and his treatise on the cotton trade of India in 1840 is in our library. The two names of deceased Fellows best known to the Society are those of Mr. Samuel Brown, F.I.A., one of the Vice-Presidents, and Mr. R. Dudley Baxter, M.A.

Mr. Brown presented to the Society's meetings three interesting reports on International Statistical Congresses, and when presiding, in 1868, over the Section of Economic Science and Statistics at the British Association in Norwich, he noticed the united action of statists in classifying the phenomena of political and social economy in different countries, and in giving to them a similarity of form.

"Thus," observed Mr. Brown, "the law of the production and "distribution of wealth, of the growth or decay of population, the "causes of early or late marriages, the effects of emigration on the "country left or adopted, the best means for the prevention or "suppression of crime, the evil effects of great standing armies "interfering with production, or causing wasteful consumption "in a country, and numerous other questions of the highest interest "to society at large, may be traced on the broad map of the continent, instead of the narrow limits of a single country."

When Mr. Brown, in 1869, reported to this Society on the International Statistical Congress held at the Hague, he noticed an important meeting, presided over by Mr. Newmarch, F.R.S., which had considered the subject of military economy. Mr. Chadwick, C.B., in eloquent terms, described three millions of men maintained in arms in Europe, at an annual cost of 280 millions sterling, and the assembly unanimously resolved that each Government should be invited to give a *résumé* of military expenses and military statistics; in how many primary schools military exercises are practised; how many officers and soldiers have been engaged in civil productive works, and with what results.

In 1872, Mr. Brown, in reporting the St. Petersburg International Statistical Congress, mentioned that in the list of facts to be registered, the sanitary condition of the army and navy had been named as affecting the efficiency and cost of those services. The forms agreed to at Berlin for statistics of recruits, and at London, relative to the vital statistics of the naval service, might be enforced for such classes among the questions comprised in population censuses.

Under the head of commercial statistics, a recommendation was made, that the adoption of the same weight and measure in the declarations made at the custom houses of different countries would greatly facilitate international commerce.

Mr. Brown in his younger days was on horseback on the Righi. The horse fell down the mountain and was killed: the rider preserved his life by laying hold of a tree. He was well acquainted with the Continent, and was an earnest friend of the metric system of weights and measures. In his professional life he was the actuary of the Guardian Fire and Life Assurance Company, and he possessed extensive knowledge relating to vital statistics.

Mr. Robert Dudley Baxter was an eminent solicitor, with large Parliamentary business. He was educated at Trinity College, Cambridge; he was a senior optime in mathematics and second class in classics, and took the degree of B.A. in 1849. In 1866 he became a member of the Council of the Statistical Society. His works comprise—"Railway Extension and its Results;" "National "Income of the United Kingdom;" "Taxation of the United "Kingdom;" "English Parties and Conservatism;" "Comparative "Taxation on Real Property, Personalty, and Income;" and "National Debts." He also contributed many statistical and political letters to the "Times." His active mind was gifted with a singular analytical skill in putting figures before the public in an intelligible form; and the financial works which came from his pen were eminently practical. At the election of 1873, Mr. Dudley Baxter was asked to come forward as a Conservative candidate for Westminster with Mr. W. H. Smith, but he felt that his legal duties had a prior claim upon his time, and he declined the honour. As a public speaker he was ready and kept to the point: he had the art of carrying a public meeting with him, and of fixing its attention. One of his acquaintances remarked of him, "If you "want a thing done and carried through you must get hold of "Mr. Dudley Baxter."

In his paper on railway extension, read to this Society in 1866, he mentions the tramway as an English invention, the locomotive he describes as the production of English genius, and he observes, that the first railways were constructed and carried to success in England.

"To this day," remarks Mr. Baxter, "whenever a railway "undertaking of more than ordinary difficulty presents itself, the "aid is invoked of English engineers, English contractors, English "navvies, and English shareholders."

With respect to national debts, Mr. Dudley Baxter quotes the examples of France, Belgium, Italy, and Austria, in favour of a sinking fund annually invested in preference shares and other stock of railways, with the interest gradually accumulating, so as to reduce a national debt. In the United Kingdom the Government duty on railways amounted, in 1866, according to Mr. Baxter, to 450,000*l.*, and he expected that it would soon reach half-a-million of pounds sterling. This amount Mr. Baxter proposed to make a sinking fund towards the purchase of 200 millions of preference shares and other railway stock, and he suggested that it should be annually invested by the Board of Trade, and that the dividends should be applied every year in augmentation of the sinking fund. As railway dividends average 4 to 4½ per cent., the dividends on the redeemed capital would pay the interest on more than 250 millions consols, and would be equivalent to the redemption of that amount of the British national debt.

Six honorary members of the Statistical Society have died during the past year, and among them two may be selected for especial mention: Mr. Spragge, of Ottawa, the statist of the Indian Department of the Canadian Government, who undertook the benevolent task of recording the numbers of the aborigines in the dominion of Canada, and assisted in the arrangements relating to Indian affairs. M. Auguste Visschers, of Brussels, was a member of the Belgian Council on Mines and an able literary writer. He was the author of a pamphlet on the Belgian electoral system, and was President at Brussels of the Congress of Universal Peace. Every five years the Belgian Government gives a prize of 5,000 frs. (200*l.*) for an essay on moral and political sciences, and in 1860 M. Visschers was the Secretary of a Committee nominated by the Royal Academy of Belgium to adjudicate this prize.

In 1867 M. Visschers published a pamphlet in favour of provident arrangements for the workpeople in mines; and he quoted the opinions of Belgian Chambers of Commerce, one of which, at Charleroy, mentions the want of knowledge of cooking in the women of a poor man's family as a reason for the food not being properly prepared, and notices the result of indifferent cookery that the workman has not obtained sufficient nourishment, and, therefore, that he goes to the public house, and tries to find in drink a substantial support of which he is really in need.

All the Chambers of Commerce in the mining district of Belgium agree in recommending that the education of the wives and daughters of miners should be improved.

Building trades in London isolate during the day large numbers of able-bodied workmen, and some instruction in cookery for their wives and daughters would materially increase their happiness. There are, among the poorest classes of the metropolis, many children whose parents cannot afford to provide them with a morning meal, even when they are directed to send their children to school; and if the cooking of a simple breakfast in such cases should be deemed expedient under the care of the school board, an opportunity may be afforded for giving elementary lessons in the rudiments of the culinary art.

In 1874 the report was published of the commissioners appointed under Mr. Gladstone's administration to inquire into the property and income of the universities, colleges, and halls of Oxford and Cambridge.

A large amount of property is held by the two universities and the different colleges in trust with the most various objects described in the several instruments of foundation. Under the University Reform Acts of 1854 and 1856, a very considerable reduction was made of the number of trust funds of the colleges, and minor foundations were often consolidated with the college property, and made liable to bear charges for the chapel, the library, and the repairs of the buildings.

The commissioners remark on the great disparity between the property and income of several colleges, and the numbers of the members; and they observe that, when that number is small, the expense of the staff and establishment is necessarily large in proportion.

An appendix is added to the report containing papers which relate to Cambridge plans of academical instruction for large towns, and also a scheme of internal reform, supported by many resident Cambridge Masters of Arts, and suggesting a revision of the pecuniary and other relations between the university and the colleges of Cambridge. The same appendix comprises the approval by Her Majesty in Council, 27th November, 1872, of several alterations of the Cambridge University statutes, and of the subscriptions appended to those statutes, for degrees in divinity, which had been previously assented to by the university. The change thus settled for graduation in divinity with the advice of the Privy Council consolidates the three articles of the thirty-sixth canon of the Church of England into one sentence, leaving out the first article of the Royal supremacy, and facilitates the taking of divinity degrees at Cambridge.

New statutes of several Oxford colleges, approved by Her Majesty in Council, are included in the appendix.

In the year 1871 the expenditure of all the colleges and halls in both universities of Oxford and Cambridge, comprising amounts from corporate income, as well as from trust income, reached the sum of 679,652*l.*, and during the same year (1871) the expenditure of the two universities alone, drawn both from their corporate and trust incomes, amounted to 75,687*l.* Hence the total expenditure from property in 1871 of the two ancient English universities, with all their colleges and halls, was 755,339*l.*

Maps and diagrams are frequently requisite to illustrate the results of statistical inquiries. M. Guerry, in 1833, published with his essay on the "Moral Statistics of France," some beautiful maps, in which dark shadings represented French departments deficient in education, and light hues gave a cheerful appearance to districts with good public instruction.

Very recently, through the instrumentality of the Hon. D. A. Wells, Professor Francis A. Walker, M.A., Superintendent of the United States Census of 1870, has presented to the Statistical Society a copy of the Statistical Atlas of the United States—compiled by him under the authority of Congress,—exhibiting the physical features of the great transatlantic republic, its population, social and industrial statistics, and vital statistics.

Professor Walker's maps show the law and order now predominant in economic science, and aid in giving similar clear ideas of the results of political inquiry, which in the kindred sciences of natural history, biology, geography, and meteorology, are attained by graphic illustrations.

Benjamin Franklin may be mentioned as an eminent American philosopher distinguished alike in electricity and statesmanship: he was the first postmaster-general of the United States, where his head now forms the postage stamp of letters throughout the Union.

During the present year, to the end of October, there have been in the Statistical Society, twenty-nine new members elected.

One honorary member, Mr. Henry Heylyn Hayter, government statist of the colony of Victoria, has been elected this year into the Society; and to-day the names of fourteen candidates for membership are submitted to the Society.

STATISTICS *at the* PARIS GEOGRAPHICAL CONGRESS.

By E. G. RAVENSTEIN, ESQ., F.R.G.S.

[Read before the Statistical Society, 16th November, 1875.]

MY report on the Paris Geographical Congress naturally divides itself into two parts, of which the one deals with the discussions carried on in the fifth group, and the other with the exhibition of maps arranged in connection with the Congress.

The fifth group of the Congress devoted its attention to economical and commercial geography and to statistics, and its meetings were presided over by M. Chevalier d'Hane Steenhuyse, of Antwerp; Professor Hunfalvy, of Pest; Professor Jahnson, of St. Petersburg; M. Chevalier de Scherzer, of Vienna; Baron F. de Lesseps; Signor Correnti, of Rome; M. Meurand, of the French foreign office; and M. Carlos Calvo, the representive of the Argentine Republic. Professor Levasseur, the accomplished French geographer, was its permanent vice-president, and M. Herz, editor of the journal "l'Explorateur" acted as secretary.

You will be pleased to hear that statistics at Paris were not confined to those narrow limits to which a certain school of statisticians would confine them. On the contrary, several of the subjects brought forward for discussion would hardly be called "statistical," even by those who interpret that term in the most comprehensive manner, and are not content with the collection and arrangement of facts, but desire to apply the results obtained to practical purposes. Those questions, which hitherto have engaged almost exclusively the attention of statistical congresses, were hardly alluded to at Paris, and others of a practical nature engaged the principal share of attention.

M. Havard, the president of one of the "Chambres Syndicates" at Paris, advocated the association of merchants, manufacturers, and scientific men for the purpose of collecting geographical and statistical information, and then diffusing it, with a view to its immediate utilisation. At Paris an attempt of this kind has already been made with a considerable amount of success. The "Commission de Géographie Commerciale" includes business men as well as savans. It has its weekly meetings, at which a great variety of questions are brought forward for discussion, and the information thus obtained is diffused through a fortnightly journal, called "l'Explorateur." There is no doubt that chambers of commerce or trade enjoy peculiar facilities for the collection of a certain class of statistical information, and statistical societies would render a service if they collected these statistics and published them in a condensed form. I may observe, in parenthesis, that in England the association of business men and savans has already made considerable progress. In our own Society, for instance, no question bearing upon commerce or trade could be brought forward, upon which one or more of our Fellows could not bring to bear a considerable amount of knowledge derived from practical experience.

M. Wagner, the editor of the "Almanach de Gotha," alluded to the importance of consular reports, and M. d'Hane Steenhuyse observed that an efficient consular service would soon pay its expenses by furnishing our merchants and manufacturers with useful information.

The subject of intercommunications occupied a great deal of the attention of the Congress. Colonel Bogdanovich brought forward his scheme of building a railway to Peking. This line would start from Nishni Novgorod, and pass through the most populous districts of Siberia. Its construction would give an immense impetus to the mining industry of the eastern slope of the Ural and of the Russian possessions in Asia generally. This project met with the support of M. de Buschen, Signor Bruniatti (secretary of an Italian government commission charged with inquiring into the best means of establishing communications with the East), and of M. Cotard, the engineer of the Turkish railways.

M. de Lesseps, on the other hand, advocated his own scheme in favour of a line from Orenburg or Ekaterinenburg to Tashkend, and thence through Afghanistan or Kashmir to India. He thought that the execution of his plan would not lead to differences between Russia and England, as the Himalayan mountains formed the only possible natural boundary between their empires. Even admitting this, we fear that the physical obstacles which such a line would have to overcome will prevent its execution for the present, at all events. M. Lubansky's project of building a railway through Persia, or a line through Asia Minor and the valley of the Euphrates, which Chevalier Scherzer alluded to, appear to us to stand a better chance of realisation.

In Europe the tunnels through the Alps occupied the attention of the meeting. M. Sautter rendered an account of the progress made at the St. Gotthard. The tunnel through Mont Cenis took thirteen years and two months to complete, but that through the St. Gotthard, though 2,690 meters longer, will probably be completed in the course of eight years. This increased rate of progress has been rendered possible by making use of the new machinery invented by Professor Colladon and Mr. MacKean.

M. E. Stamm, the engineer of the Mont Cenis tunnel, who died unfortunately a few days before the opening of the Congress, had sent in a plan for tunnelling Mont Blanc, which was illustrated by an excellent model of that giant amongst the mountains of Europe.

Inter-oceanic ship canals formed the next subject of discussion, and particularly one which is to join the Atlantic to the Pacific. You are aware that there exists a multitude of projects for accomplishing that object, and several of these were discussed on the present occasion. M. de Lesseps opened the discussion. He alluded with pardonable pride to the obstacles, physical and moral, which had been overcome in the construction of the Suez canal. He was decidedly of opinion that a ship canal must be constructed without locks, for these are costly to maintain and cause much delay to vessels passing through. M. Dauzat, the engineer of the Suez canal, took the same view, and pointed out that a canal having locks and no current would soon become silted up by the matter swept into it after heavy tropical rains.

M. Gogorza then introduced his project, originally conceived in 1866, of constructing a canal across the Isthmus of Darien, from the mouth of the Atrato to that of the Tuyra. He said that there was a break in the mountain there, and in former times the two oceans communicated. M. de Gogorza, in support of his assertions, appealed to the last American expedition, but he surely ought to have known that Commodore Selfridge considers it impossible to construct a canal in the direction proposed, the land between the two oceans attaining a height of 1,200 feet.

M. de Puydt opposed Gogorza's project, and brought forward his own plan of cutting this canal through the hills near the Puerto Escodido, where there was a low pass easily cut through.

The old project of a canal through the Isthmus of Panama was advocated by Mr. Nourse, of the United States Observatory, and by Chevalier Scherzer. This line would certainly render locks necessary, but it strikes us as being the most favourable amongst all that have been proposed. Thus far no new project had been submitted to the meeting. It was reserved for M. Michel Chevalier to do this. This eminent political economist asserted that the tidal action of the two oceans would result in rushes of water through a canal having no locks, and prove its destruction. This was at once denied by the engineers present at the meeting. M. Chevalier then submitted a modified Nicaragua scheme. He proposes to enlarge that lake to twice its present area by throwing a vast embankment across the San Juan, and then to connect it with the Atlantic and Pacific by means of two canals. We need hardly state that this heroic scheme found no supporters.

M. Peralta stated that the Government of Colombia was about to make further surveys, and the Congress resolved that the Governments concerned be requested to give their immediate attention to the subject, with a view of ascertaining the line most favourable to the construction of a Central American ship canal.

Connected with this question of inter-oceanic canals is the proposed formation of an inland sea to the south of Algeria, which was advocated by Captain Roudaire. It has long been known that the Shotts of Southern Algeria form depressions below the level of the Mediterranean. Careful measurements recently conducted by Captain Roudaire have confirmed this fact, and should the Shotts of Tunis be likewise below the sea-level, and the neck of land at the head of the Gulf of Gades, offer no obstacles to the cutting of a canal, it is asserted that the waters of the Mediterranean might easily be let in. Such a sea, Captain Roudaire asserted, would cause fertilising rains to fall upon the now barren slopes of the Aures mountains, and create a brisk commerce. M. Fuchs, however, who had recently explored the Shotts of Tunis, declared this scheme to be impracticable, and said that if the Shotts were filled with water they would become foci of miasmic diseases. M. Fuchs' altitudes being based merely upon aneroids were questioned, but M. Correnti stated that a more exact survey conducted by M. Antinori and Italian engineers had resulted in a report equally unfavourable to the scheme. There the question rests for the present, but its advocates call for further surveys, and we must admit that their scheme is based upon facts, and not like that of the proposed inundation of the Western Sahara—upon mere supposition and fiction.

The inundation of the Algerian Sahara naturally leads us to a consideration of the commerce across that desert, which the French are so eager to develope. M. Napoleon Ney pointed out that during the middle ages a most flourishing commerce was carried on there, in which Europeans participated largely, but that it collapsed when the Turks extended their power to the Mediterranean shores and the French occupied Algeria. M. Duveyrier spoke on the measures to be taken to revive this trade. He said that the routes to the Sudan which led through the Sahara were still more rapid than any others, owing to the rapacity and hostility of the tribes who shut out interior Africa from the sea-board. He advocated that the old road by way of Tuat and Insalah to Timbuktu be reopened. M. Soleillet, besides Rohlfs, the only European who has visited Insalah in recent times, likewise considered this to be the most favourable route. He proposed that a *funda* or factory be established at Insalah, which would be presided over by a French consul, but to which all travellers, without distinction of nationality, should be admitted whom business or scientific pursuits took to that part of the world. M. Herts drew attention to the fact that the route *viâ* Tuat and Insalah was not at present a safe one for European travellers (a fact confirmed by G. Rohlfs), but that the Ghadames route had virtually been opened. He was in favour of our availing ourselves of the latter to the fullest extent, and as commerce developed itself, means, no doubt, would be found to open other routes.

The last question which engaged the attention of the Congress was that of "Emigration, Colonisation, and Manual Labour in "Tropical Countries." These are kindred subjects, and though much time was spent in their discussion, it struck me that no new facts of importance or original views were brought forward. M. l'Abbé Boué, who had resided for a number of years on the slave coast, was of opinion that whites were not able to perform manual labour in tropical countries, though they might superintend it. Even the river navigation there required the assistance of the coloured race. MM. Delagrange and Peralta took exception to this sweeping assertion, and maintained that white colonists might become acclimatised on plateaux; and M. Bainier went still further, and asserted that, by observing certain dietary rules, white settlers were able to perform all kinds of work in tropical countries. As an instance he referred to the Provençals employed in the French factories on the coast of Africa. The most extreme view on the subject was that of M. Bionne, who considered that the second or third generation of whites would become perfectly acclimatised anywhere, and regreted that the Alsatians did not emigrate to Guadelupe or Martinique.

M. Levasseur pointed out, on the other hand, that acclimatisation depends not only upon climate, but also upon race. In Algeria only Jews and Maltese, both of Semitic descent, acclimatised themselves readily, and next to them the natives of Spain and of other parts of Southern Europe; but that amongst the immigrants from Northern France and Germany the deaths exceeded the births. M. Busson-Leblanc confirmed this, and said that even Frenchmen who migrated from northern to southern France degenerated physically.

The general opinion of the meeting appeared to be that recourse must be had to the coloured races for the performance of manual work in the tropical countries. Chevalier Scherzer did not think we could rely upon the negro. The Chinese appeared to him to make the best immigrant, and if allowed to bring his wife he would settle in the country, as long as he felt sure of his body being taken back to the middle kingdom after death. The Abbé Durand looked upon Chinese as mere birds of passage, and thought that we must have recourse to Hindoos or negroes.

The whole of this subject was referred to a sub-committee, who presented their report before the conclusion of the Congress. They recommend that an international emigration commission be appointed, whose duty it would be to study the subject of emigration; and that societies for the same object be established in all countries interested in this question.

They likewise endorsed the following views expressed by individual members of the committee:—

1. Emigration to be freed from Government interference.
2. Emigration to be made the subject of international treaties.
3. Emigrants, on reaching their destination, should be taken care of.
4. No emigrant should leave his native country without having previously secured a labour contract.

I now propose to offer a few remarks on the exhibition. The number of objects exhibited was exceedingly large; too large, indeed, to enable the visitor to obtain a full grasp of them, even if he felt inclined to confine his attention to a particular subject.

Several of the leading statistical offices of the world exhibited their publications, but as most of these are to be found in our library, I confine myself to a notice of statistical maps. A map of this kind is intended to present graphically the numerical results obtained by statistical inquiry, and you will agree with me that, as respects the geographical or topographical distribution of phenomena, such a map, judiciously elaborated, conveys far more accurate notions than are to be gathered from tabular statements. No method for recording almost every kind of statistical information can compare with it. It affords a test of the completeness of the information collected, and I have no doubt that an attempt to embody the statistical publications of this country in this manner would lead to the discovery of many imperfections which it would be our duty to repair. In England we have not yet sufficiently availed ourselves of this means of conveying statistical information; and even our last census returns, voluminous as they are, have been published without maps. I am not, unfortunately, in a position to place before you any of those maps I have seen in Paris; but I am very pleased to hear that one of the works I saw there—Mr. Walker's statistical atlas of the United States—has been added to our library. It is one of the most valuable publications of its kind; and if you spend an hour in its examination, you will admit that during that hour you will have gained more knowledge about the natural resources of the United States and their geographical distribution than it would be possible to obtain by studying a number of volumes. It is, I may say, the concentration or essence of statistical information which is laid down in these maps. Of course statistical maps are no novelty in England, for they have been published on many occasions: I only say they are not published as frequently as in some foreign countries.

As far as the Paris Exhibition is concerned, I would mention particularly Russia, Austria, France, and Norway. The Russians did everything in their power to make a fine show at the Paris Exhibition. They certainly brought forward every book that had been published in Russia or in Russian since the beginning of last century. In fact, if every other country had followed the example of Russia, the Paris Exhibition would have presented to us the most valuable and complete geographical library in the whole world.

Amongst their maps there were a large number in manuscript, showing the results of the last campaign in Khiva, and of other campaigns in Central Asia. Many of them were of immense size, and full of most valuable information; but they have been carried off, and I am afraid many of them will never be published. The statistical maps were distinguished by variety, and the various Government departments vied with each other in exhibiting in a graphical manner the social and industrial condition of that empire. The "Central Committee of Statistics," was represented by a series of maps illustrating vital statistics; the minister of justice exhibited a set of maps illustrating the judicial statistics for 1873. The agricultural department illustrated the capabilities of the soil, its cultivation and the breeding of cattle. The ministry of commerce presented us with a graphical representation of the traffic on railways and rivers, and there were likewise mining maps, forest maps, and others. One of the most interesting of all was the elaborate language map prepared by M. Rittich. It exhibited in a most striking manner the gradual absorption of the minor nationalities by the great Russian race; and showed clearly that the time is not far distant when the whole of that vast empire will be inhabited by *one* people speaking the same language. The Jews are honoured by being represented as a distinct nationality on this map, and it is curious to see how widely they are disseminated amongst the Poles, the Lithuanians, and Little Russians, whilst they are almost completely absent from the rest of the empire.

In the Austrian department the most important map was an agricultural one, on a large scale, elaborately and tastefully tinted, and showing the extent of arable lands, meadows, pastures, woods, vineyards, and unproductive areas, not according to their proportion to the total area of the various districts, but according to their actual extent, as shown on the cadastral plan. I need hardly say that a similar map of this country could not be produced at all, owing to our not possessing the requisite information. The Statistical Office at Pest likewise exhibited a few interesting maps.

Norway was amply represented by maps prepared in various Government departments, and from some of the facts illustrated by them, it is quite evident that statistical inquiry is extended sometimes abroad to subjects which we allow to remain unrecorded.

France was most creditably represented, and though geography and statistics may not be popular sciences in that country, there is no doubt that they are being cultivated with intelligence and success by Government departments, scientific bodies and individuals. I would instance, as samples of French statistical work, Heuze's "La "France Agricole," and the maps prepared by order of the Geographical Society of Bordeaux, and illustrating the statistics of La Gironde.

In conclusion, I feel bound to express my high appreciation of the utility of an exhibition such as that arranged at Paris, but think that on any future occasion of this kind the number of objects exhibited should be limited in favour of such as are really deserving the attention of scientific men.

JOHN HOWARD'S TRUE PLACE *in* HISTORY. A SUPPLEMENT *to the* PAPER *entitled* "JOHN HOWARD *as* STATIST." *By* WILLIAM A. GUY, M.B., F.R.C.P., F.R.S., *Professor of Hygiène, King's College, London; Consulting Physician to King's College Hospital; and one of the Honorary Vice-Presidents of the Statistical Society.*

[Read before the Statistical Society, 16th November, 1875.]

I AGAIN ask permission of the Fellows of the Statistical Society to address them on the subject of John Howard. The first occasion of my so doing was the January meeting of 1873; and I made choice of that year, because it was the centenary of Howard's appointment as High Sheriff of the county of Bedford. My object, you may remember, was to show "that the John Howard, "whom most men know only as the first of philanthropists, was "also one of the foremost statists of his time." If this be so, it follows that there is no society with which his great name can be so fitly associated as with ours. This association has now been brought about: a Howard medal has been founded, and for the first time worthily awarded, and duly presented; and I, therefore, deem the occasion a suitable one for allotting to Howard what I believe to be his true place in history, not only as the founder of a new method of procedure in matters social, but as the inaugurator of a new epoch in the history of England and the world.

To some it may seem strange that now, after the lapse of a century from the date of Howard's most conspicuous public service, and of eighty-five years from his death, I should deem it possible to throw any fresh light on the nature of the services he rendered us, and his consequent true place in history. For Howard's contemporaries, among whom he lived and laboured, were not niggard of their praise. Indeed the most eminent men of the day, some in poetry, some in prose, may be said to have exhausted the language of panegyric. They spoke of him as the "consummate philanthropist;" "a patriot of the world;" "the most truly "glorious of mortal beings;" "the Godlike;" as one who had lived "an Apostle, and died a martyr;" and they classed him with Shakespeare and Newton, as being, in his line, as they in theirs, unrivalled and inimitable. They expressed a hope, too, that his life and actions might become "an epoch in the moral "history of mankind;" and Edmund Burke, in the course of a noble panegyric, well worthy both of its author and of its object, recognised his "plan" as "original," and one "as full of genius" as "of humanity;" and Lord Thurlow again spoke of him as one "whose humanity, great as it was, was at least equalled by his "wisdom."

Nor have the many biographers and panegyrists, who have written about Howard since his death, fallen short of the high standard of praise set up in his own day, or failed to recognise in his original and characteristic labours a philanthropy of a novel kind. If the true nature of Howard's work has escaped the readers of his biographies, it is because the chronological order, which is of the very essence of a biography, leads to the mixing up of matters of trivial importance with others that serve to stamp the character of the man, and give individuality to his proceedings.

What then, you may ask, remains to be said on this topic? I answer, that which is impossible to contemporaries, possible only for those who have lived long enough to take note of the degree and extent to which the example given to the world has been imitated; the model copied. We who are now living know that Howard was the founder of a new epoch, because we are the witnesses from day to day of the adoption by the State of the very method of procedure which Howard used on the many occasions on which he found work to do. Let me briefly explain to you what this method was. But first let me remind you of what I may venture to call Howard's preparation and training for the characteristic work of his riper years.

Howard found his first opportunity of rendering a great public service in the year 1756, when he was 30 years old, and soon after his election as a Fellow of the Royal Society. He was captured on the high seas, and imprisoned in France, where he shared the sufferings of large numbers of his fellow countrymen; but having been liberated on *parole*, he remained in France till he had made himself master of all the painful facts and figures relating to their captivity. He then came to England, and submitted these facts to the "Commissioners of Sick and Wounded Seamen," who thanked him for his services, and, remonstrating with the French Government, brought about an exchange of prisoners, and, as I infer, a redress of the grievances that Howard had pointed out. In this instance Howard's self-imposed duty began with a most laborious investigation of the facts of the case, and ended when he had placed the matter in the hands of the commissioners, who proved to be both willing and able to obtain redress. Seventeen years elapsed before Howard found occasion to embark on a similar enterprise, but during that interval he was not idle. He was reconstructing the village of Cardington, and endowing its inhabitants with health, comfort, and improved morals; at the same time that he was cultivating his habits of exact observation on every occasion—at Cardington, at Bath, on the crater of Mount Vesuvius—on which he could bring his favourite instrument, the thermometer, into play. So that he entered upon his duties as high sheriff of the county of Bedford at the ripe age of forty-seven, with the recollection of a great wrong redressed, the experience of a wise and beneficent reform steadily and continuously carried forward on his own estate, and his powers of observation in good training. It might be predicated of such a person that if he found work to do he would know how to set about it; and that he would not fail for lack of zeal, ability, or perseverance. Of courage in facing every form of danger, of adroitness and presence of mind in dealing with every kind of emergency, of calm judgment and sound sense in recommending all those improvements in the management and treatment of prisoners which we ourselves have adopted, Howard was yet to furnish proofs and illustrations.

That we may understand Howard thoroughly, we must follow him step by step—first in his early journeys as Sheriff of Bedford, and then in his several unofficial tours of inspection among the prisons and public institutions of England and the continent.

Among the duties which devolved upon Howard as high sheriff, there was one which others who held the same office had for one reason or another neglected, but which he hastened to perform; it was the duty of inspecting prisons. He began his work of inspection at Bedford, and found the three prisons (the county gaol, the town gaol, and the county bridewell) equally the scenes of the strangest and most cruel abuses. He found innocent men in large numbers detained in prison for long periods of time (perhaps to die there), through inability to pay certain fees allowed by the justices, which in fact constituted the gaoler's chief source of income. He learnt that all prisoners, the poorest debtor not excepted, were forced to pay a sort of entrance fee under the name of *garnish*—to pay with money, if they had it; if not, with the clothes off their backs—to furnish a supply of beer to the rest of the prisoners, which beer, often of his own brewing, the gaoler sold at the prison tap. Howard found also that our prisons were for the most part private property, originally faulty in construction, allowed to fall out of repair, often so insecure as, on the one hand, to invite attempts at escape, and, on the other, to tempt the gaoler to put in practice the most cruel methods of precaution and restraint. As these places of confinement too were not as a rule built for prisons, they proved in every way unsuitable for their purpose. They were often found to be constructed and tenanted in such a way as to promote to the very utmost the destruction of health and life, and the corruption of morals. It is hard to imagine any act of omission or commission, tending the one way or the other, of which our English prisons were not the scenes. The destruction of health and life was insured by the exclusion of every agent by which the one is promoted, the other prolonged. Food and water, air and light, fuel and clothing, exercise and recreation, all tainted or excluded; and, as a natural result, gaol fever and confluent small-pox afflicting and destroying not the prisoners only, but the gaolers and their families, and conveyed in various ways to the outside population of villages and towns, to courts of justice, and to our armies and fleets.

Howard did not see and fully appreciate all these evils at once. What struck him first and most forcibly was the injustice wrought by illegal fees. The destruction of health and life, and the corruption of morals, and the manifold neglects by which they were brought about, forced themselves on his attention later in the day, especially during his visits to certain bridewells and houses of correction.

The illegal fees of which I am speaking were, as I have said, the main source of a gaoler's income; and Howard, with that quick and just perception of cause and effect, of wrong and remedy, for which he gave himself so little credit, saw at a glance that the cure of this evil lay in the substitution of a fixed salary to the gaoler for these fluctuating fees. Accordingly he made application to the justices of the peace, asking them to institute this needful reform; but they told him that they could not act for want of a precedent.

Howard then, first in post-chaise, afterwards on horseback, in the winter of 1773-74, started, note-book in hand, in search of a precedent. He inspects the county and borough gaols, the bridewells and houses of correction, of all the midland counties, visiting several of them twice over, and he also inspects the prisons in London. I infer from the dates attached to his descriptions in his work "On the State of Prisons," that he set out on this winter's journey about the middle of November, 1773, and made his visits at intervals during December of the same year and the January and February of the year following; but in none of the prisons he visited could he find the precedent of which he was in search. This I look upon as a most fortunate circumstance: for had Howard, during some early visit, found that which he sought, he would probably have gone back to Bedford, told the justices of his success, and persuaded them to substitute a fixed salary to the gaoler for these objectionable fees and fines, and with this local reform Howard might have rested satisfied; but travelling, as he was led to do, from place to place and inspecting prison after prison, he not only found the wrong done at Bedford prevailing everywhere else, but each fresh prison either revealing some new defect of structure or administration, or adding force and piquancy to the lessons which those previously visited had taught him; so that drawn on and on, and farther and farther, in search of a precedent, he was becoming ever better and better acquainted with the manifold evils, physical and moral, that had made the prisons of England their home. Thus it came to pass that he who had set out in search of a simple means of rectifying a local abuse, found the note-book (which as he tells us he could not use till he had aired it at the inn fire, and so driven off the foul vapours of the prison)—he found his note-book filling fast with plain and truthful records of universal abuses.

These were the facts which Howard submitted to Parliament; these the facts that so worked upon the feelings and consciences of its members as to make further inquiry needless, and delay a thing not to be thought of. Accordingly, without loss of time, the legislature passed two Acts, the one for the relief of prisoners who should be acquitted, respecting their fees, the other for preserving the health of prisoners and preventing the gaol distemper. This done, the House of Commons acknowledged Howard's services by a public vote of thanks, and I cannot but think that, had he not been the unique character he was, he would have gone back to Cardington bearing with him the happy consciousness of having done a great work and achieved a great distinction. But Howard seems to have somehow discovered what our legislators themselves appear to have been unconscious of, that Acts of Parliament to be obeyed must first be known to all who have to put them in force, and that then some machinery must be provided by which those persons may be got to do, and persevere in doing, what the Acts in question require of them.

Howard, as I say, knew this, and accordingly, without loss of time and at his own expense, he first published and sent to every prison in England and Wales copies of the two Acts of Parliament; and then, also without loss of time, set out on new tours of inspection, during which he visited every prison in the United Kingdom, and made several journeys to the continent, extending his visits to those of France, Holland, Flanders, Germany, and Switzerland, in search of information that might be brought to bear on the improvement of our English prisons.

The precious results of these tours of inspection carried on during the years 1773, 1774, 1775, and 1776, Howard published, at a low price and at his own risk, in his "State of Prisons." How needful were the several practical steps he had thus taken, may be inferred from what I have already had occasion to state, that the Acts of Parliament he had been at such pains to publish and make known, had been strictly obeyed and literally carried into effect, in only 15 out of 130 of the prisons that he inspected.

How Howard persevered in his work of prison inspection, publishing the results in new editions of his work; how he extended and enlarged his plan, so as to embrace not gaols only and the hulks, but hospitals and lazarettos, workhouses and schools, camps and barracks, indeed, every public institution, at home and abroad, in which he thought it likely that the lazy Lord of Misrule would seek to establish his mixed empire of negligence and cruelty, I have no time to point out. What I wish to affirm of Howard is this: that in his own person, of his own free will, and at his own cost, he set the first example of that method of procedure in bringing about the reform of abuses which the people and Government of England now resort to on every suitable occasion. Let me explain myself. Some person, among those lookers on who proverbially see more of games than the players themselves, happens to become cognizant of some cruel injustice, the inheritance perhaps of remote times, the product, may be, of some brisk and thriving industry, and he exposes it. If there is real ground of complaint, the public is brought to sympathise with the sufferers, the press gives the needful publicity, and possibly some benevolent association lends its support. The subject is brought under the notice of Parliament, or laid before some executive department of the Government. A Parliamentary Committee or a Royal Commission is appointed, witnesses are examined, evidence taken. The results are embodied in a report. At length an Act of Parliament is passed, and Inspectors are appointed, with power in some cases to bring about the punishment of those who neglect its provisions or set them at defiance; in others to give, by means of periodical reports, that publicity which either checks malpractices, or, by pointing out legislative shortcomings or defects, paves the way for improved legislation. It is by such successive processes as these, that our great social evils and wrongs are first exposed, then prohibited, then watched, checked, and destroyed.

Now every word of this description applies in its full force to the method of procedure of John Howard. Before his time men were not wholly ignorant of the wrongs and cruelties which had come to prevail in our prisons. As early as 1701, the Society for Promoting Christian Knowledge sent a committee to visit Newgate, of which a Dr. Bray was the chairman. This committee extended its inquiries to the Marshalsea and other prisons, and found the state of one and all of them deplorable. We are indebted to Mr. Hepworth Dixon, one of Howard's biographers, for publishing Dr. Bray's "Essay towards the Reformation of Newgate, and the other "Prisons in and about London," in which the strange abuses found in them are exposed, and suitable remedies pointed out. This important and interesting document, after lying buried among the archives of the society for a century and a half, has been brought to light. But it led to no reform or improvement, and the Parliamentary Committee of 1729, with General Oglethorpe for its chairman, exposed the inhuman practices of certain gaolers with no better result. The subject seems to have fallen asleep, as it were, till about 1773, when Mr. Popham brought a Bill into the House of Commons for abolishing gaoler's fees, and substituting for them fixed salaries payable out of the rates. This Bill, after making some progress in the House, was withdrawn.

Howard probably knew of this movement; so that when he entered on his official duties of inspection as high sheriff, his attention was naturally directed in the first instance to the evil wrought by this false system of payment. But the other abuses of our prison life were not long hid from his penetrating glance, and the short winter's journey which I have described to you made him perfect master of all the facts of the case. He became cognizant of all the physical and moral elements which went to make up the grand total of personal injustice and national peril. It is reasonable to suppose that these facts would be brought to the knowledge of Mr. Popham, Mr. Whitbread (Howard's relative), and other members of the House of Commons interested in the subject of prisons, and thus it would happen that the long and tedious process of instructing and interesting the public might be rendered unnecessary. And so it was: for the House of Commons was led to resolve itself into a Committee of the whole House, Howard was called to the bar and examined, the House was satisfied with his statements, only seeking further instruction from Fothergill the physician, and Pott the surgeon, as to the cause of the gaol fever and the proper methods of preventing it. Howard was again called to the bar of the House to receive the public vote of thanks he had so richly merited. The House then proceeded to pass the two Bills, the one for putting an end to the abuses arising out of fees and fines, the other for preventing the gaol distemper. Then followed, as I have said, the publication and circulation at Howard's own cost of the two Acts; then, with the least possible delay, the work of inspection, which he continued to carry on at short intervals for fourteen years, and, side by side with it, the repeated publication of results both in successive editions of the "State of Prisons," and in his second great work on "Lazarettos;" and so ended that sequence of laborious inspections and publications which, as I have just pointed out, constitute the true exemplar and prototype of all the movements in favour of social reform which have taken place since Howard's day.

Howard's true place in history, then, is as the discoverer or inventor of that modern method of dealing with social wrongs which is gradually building up for us a civilisation deserving of the name. To affirm this of Howard is not to detract one iota from what I said about him on a former occasion, when vindicating his claim to be welcomed as a Statist in the truest and best sense of the term. Nor ought what I have said this evening to be taken as impairing in the least degree Howard's right to be called emphatically the philanthropist; for as a philanthropist, in the fullest sense of that term, he stands, and will probably continue to stand alone. We know that no one in times past can be compared to him in the practical sympathy he displayed towards every variety of human suffering; and it is hard even to imagine that any man in times to come shall prove his rival.

But here again I must insist once more on the essential difference that exists between the preventive philanthrophy of Howard and the palliative policy of his predecessors in well-doing. Seventeen centuries and more before Howard's time the policy of prevention, if I may so express it, had been applied with the highest authority to the individual. The outward act had been traced to its inward source, and men were bidden to restrain the motor thought that led to acts of fraud or violence. But the injunction stopped short with the individual. It was the true glory of the modest, noble Howard that he extended to the mass what had hitherto been limited to the man, and too often, alas! with consequences the most disastrous. Far from accepting as a truth the words that most men are wont to cite with complacent assent—

> "How small of all that human hearts endure,
> That part which laws or kings can cause or cure,"

Howard, in every act of his life, set forth in his own silent way his belief in the opposite doctrine, and, acting on that better faith, taught us of how much wrong and suffering the State, by omission or commission, can become the direct cause, and how truly in the case of communities as in that of individuals, external results may be traced to causes that conceal themselves in some unsuspected source, which is to the body politic what the heart is to the hand.

Dr. Guy, in acknowledging the customary vote of thanks, took occasion to vindicate Howard's memory from the strange mistakes and misconceptions which prevail respecting his treatment of his only son. He also submitted to the Society some coloured views of Cardington by Mr. Piercy, with photographs, plans, and elevations of a double cottage built by Howard more than a century ago.

STATISTICS RELATING *to the* COLONY *of* VICTORIA, AUSTRALIA.

By WILLIAM EMERY STARK, F.S.S.

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HAVING spent many years in the above colony, in which I cannot but feel great interest, I have endeavoured in the following pages to lay before the Society a few facts and figures relating to it, especially as the colony has not been brought before the Society since 1854, when a paper was read by Mr. G. M. Bell (vol. xvii, p. 259).

The facts referred to by him extended only to 1853, and as most important changes have occurred since that time, it may be useful to carry the facts to the latest date, which I have attempted to do in this paper.

Any one who studies the documents relating to the colony cannot fail to notice the carefully compiled returns that have been annually issued under the superintendence of the Registrar-General of the colony (Corresponding Member of this Society); returns that are not equalled—much less excelled—by any other of our colonies, and it is to be regretted that similar returns have not been furnished by the other Australian colonies, so that the progress of each might be occasionally compared. Efforts were made in 1862 to carry out such an intention, but unfortunately were not successful.*

At the time when this Society was organised, Victoria was comparatively unknown, being at that period (1834) a portion of the colony of New South Wales. It was first settled in 1835 and bore the name of the Port Philip District.

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* It may be mentioned that since this paper was compiled, extra efforts have been made to carry out this object, and fortunately to a successful issue. In the early part of this year, a conference of the representatives of New South Wales, Victoria, South Australia, and Tasmania was held at Hobart Town, and from and after this year we may expect uniform returns from the four colonies mentioned, and it is to be hoped that the remaining colonies, Queensland, New Zealand, and Western Australia, will co-operate in the scheme of statistics laid down by the conference.

It was erected in 1851, by Imperial Act of Parliament (13 and 14 Vict., cap. 59), into a separate colonly, and called "Victoria."

The constitution was established by an Act of the Legislature of the colony in 1854, to which the assent of the Crown was given.

This charter vests the legislative authority in a Parliament of two Chambers, viz., Legislative Council, composed of thirty members, and the Legislative Assembly, composed of sixty members; the qualification for the former now being, as regards members, that they should be the possessor of an estate rated at not less than 50*l.* a-year; and as to electors, the possession of real property of the value of 50*l.*, or producing 5*l.* per annum. One-fifth of the Council retires every two years.

The members of the Assembly are elected by universal suffrage. Clergymen and persons convicted of felony are ineligible for seats in either Council or Assembly.

The executive is vested in a Governor appointed by the Crown, who is assisted by a Cabinet of eleven members, viz.—Chief Secretary; Attorney-General; Treasurer and Postmaster-General; Commissioner of Trade and Customs; Commissioner of Railways and Roads; President of the Board of Land and Works and Commissioner of Crown Lands and Survey; Solicitor-General; Commissioner of Public Works; Minister of Mines; Minister of Agriculture; Minister of Public Instruction.

I now come to the subject of my paper, viz., the "Statistics of "Victoria," which are deduced from the return issued by the Registrar-General and annually presented to the Legislature.

These are divided into nine parts, as follows:—

I. Blue Book.—Governors since 1839; Ministers since 1855; Parliaments; Executive Council; Legislative Council for the year; Legislative Assembly for the year; Foreign Consuls; Pensions; Military and Naval Forces and Volunteers.

II. Finance.—Balance sheet; revenue and expenditure; special appropriations; public debt; expenditure on immigration; expenditure on public works, roads, and bridges; expenditure on Victorian railways.

III. Population.—Population; census returns; immigration and emigration; population in the gold fields; cities, towns, and boroughs; shire and road districts; naturalisation; number of electors.

IV. Accumulation.—Royal mint; banks; post office savings banks; savings banks; mortgages and releases on land; mortgages and releases on live stock; preferable liens on wool and releases: building societies.

V. Interchange.—Imports and exports; shipping inwards and outwards; vessels built, registered, and licensed; postage; money orders; telegraph; railways; wages in Melbourne and country;

prices in Melbourne and country; price of gold; importations of live stock overland.

VI. Law, crime, &c.—Real Property Act and Transfer of Land Statute; equity transactions; insolvencies; intestate estates; criminal statistics; litigation (supreme and other courts); reformatories; suicides; inquests; fire inquests.

VII. Religion.—Moral and intellectual progress; churches, chapels, &c.; Melbourne university; schools, colleges, &c.; museum, public libraries, and mechanics' institutes; charitable institutions.

VIII. Production.—Crown lands granted and sold; squatting runs; agricultural statistics; live stock; manufactories, works, &c.

IX. Vital Statistics, &c.—Births, marriages, and deaths; vital statistics of hospitals, benevolent and orphan asylums, hospitals for the insane, deaf and dumb institutions, industrial schools, reformatories; friendly societies; meteorological observations.

It is not my intention in the present paper to go fully into many of the numerous headings above mentioned, but I hope at some future time (if permitted to do so) to take one or more, such as imports and exports, agricultural and vital statistics, and elucidate them as far as possible.

Finance.

Revenue and Expenditure.—The chief sources of the revenue until about 1862 were customs duties and sales of public lands, but now an additional income is derived from the railways, the management of which remains in the hands of the Government.

The revenue of the colony is over 3,250,000*l.*, and the expenditure is about equal. On looking at the year 1873, the former is 3,644,135*l.*, and the latter 3,504,953*l.*, showing a surplus of nearly 140,000*l.*, and taking the population at 790,492, and comparing it with these estimates, it will follow that the revenue is 4*l.* 12*s.* 2*d.*, and the expenditure is 4*l.* 8*s.* 8*d.*, to each inhabitant.

The annexed gives the revenue and expenditure since the separation from New South Wales, and in Table A I have given the sources of the revenue in the five years 1869-73:—

	Revenue.	Expenditure.
1851	392,455	410,864
'52	1,634,448	978,722
'53	3,235,546	3,216,609
'54	3,087,986	4,185,708
'55	2,728,656	2,612,807
'56	2,972,496	2,668,834
'57	3,328,803	2,968,658
'58	2,973,383	3,092,720
'59	3,261,104	3,398,946
'60	3,082,461	3,315,307
'61	2,952,101	3,092,021
'62	3,269,079	3,039,497
'63	2,774,686	2,882,937
'64	2,955,338	2,928,903
'65	3,076,885	2,983,777
'66	3,079,160	3,222,025
'67	3,216,317	3,241,818
'68	3,230,753	3,189,321
'69	3,383,984	3,226,165
'70	3,261,883	3,428,382
'71	1,691,266*	1,754,251*
'72	3,734,422	3,659,534
'73	3,644,135	3,504,953

* The financial year was changed so as to terminate on the 30th June in lieu of 31st December, these figures are therefore for six months only.

Public Debt.—At the end of 1873 this amounted to 12,445,722*l.*, raised by loans at various dates for the construction of railways, public works, for the supply of water to Melbourne and Geelong, colonial defences, graving dock, &c. (Table B).

Population.

The first account we have of the population of Victoria (then called Port Philip) is taken from some notes of Captain Lonsdale, afterwards the first colonial secretary. From that document it would appear that in May, 1836, the total population was 177. This may be called the first official census of the district. In November of the same year the number was put down at 224.

In 1838 this had increased to 3,511, and on examination of Table C it will be noticed how rapidly the numbers swelled, till they amounted in 1851 to 77,345, and in 1871 to 731,528.

The discovery of gold in 1851 caused such an influx, that in three years they had increased three fold.

The last census was taken on the 7th April, 1871, with the following result:—

	Males.	Females.	Total.
Exclusive of Chinese and aboriginals....	382,367	329,896	712,263
Chinese	17,899	36	17,935
Aboriginals....................................	784	546	1,330
Totals	401,050	330,478	731,528

The aboriginals are under the protection of a central board, who receive and expend annual sums voted expressly by Parliament, by which means those in want can always obtain food and clothing at fixed stations, and the sick are in like manner provided with medical attendance, &c.

With regard to the aboriginals it cannot but be remarked how their numbers are decreasing:—

In 1851 there were 2,693; 1857, 1,767; 1861, 1,694; 1871, 1,330.

Assuming these figures to be correct, the numbers have diminished upwards of 50 per cent. in the twenty years 1851-71.

An estimate of the population is made up quarterly in the registrar-general's department, from the records of births and deaths, and of arrivals and departures by sea. At the latest date, 31st December, 1873, they are given as:—

Males, 430,042; females, 360,450; total, 790,492.

The details for the last census (April, 1871) being now completed, I have given the figures for 1861 for the birthplaces and religion (Tables D and E).

With respect to the first of these, Victoria claims 45·06; England, 22·46; other Australian colonies, 3·92; Ireland, 13·73; Scotland, 7·69.

Church of England, 35·25 against 39·25 in 1861; Roman Catholic, 23·32 against 20·33 in 1861; Presbyterian, 15·45 against 16·12 in 1861; Wesleyans, 12·88 against 8·61 in 1861; Pagans, 2·41 against 4·85 in 1861.

Immigration and Emigration.—From the first settlement of the colony to the end of 1873, 1,076,060 persons (762,600 males, 313,460 females) are recorded as having arrived, and 614,866 persons (485,017 males, 129,849 females) as having left the country; the excess of arrivals over departures being 461,194.

The largest immigration occurred in 1852 (94,664), and the largest emigration in 1853 (42,443).

The practice of the legislation has been to grant aid to certain classes of immigrants, by defraying the whole or partial cost of transit from Europe.

The total number assisted from 1838 to close of 1873 amounted to 167,854, Table F.

Boroughs, Shires, and Road Districts.—There are two modes of local self-government existing, legalised and regulated by acts of Parliament, the one by municipalities or boroughs, the other by shire or road districts.

The boroughs must not be of greater area than 9 square miles in extent, and must have a population of at least 300. They are governed by a council of nine, who have the power to levy rates, make bye-laws, &c. Three of the council retire every year.

Rates are levied upon all lands within the borough, except crown property, mines, and reserves for charitable, ecclesiastical, and educational purposes; the rates not to exceed 2*s.*, or less than 6*d.*, in the pound, upon the net annual value of the rateable property.

Road districts must embrace at least 40 square miles, and contain rateable property of not less than 5,000*l.* annual value. The district board, consisting of six members, may levy the same rates as above mentioned, upon all land within the district, with the above exceptions.

On crown lands leased for pastoral purposes only, the levy is on the third part of the net annual value.

District boards can make bye-laws for the management of their respective districts, and expend the district revenues in constructing and keeping in repair roads and bridges within its boundaries.

Road districts containing an area of not less than 100 square miles, may be proclaimed as shires, provided that their actual revenue from rates is not less than 1,000*l.* annually. This gives them additional privileges to those enjoyed by road districts. The district board (then called shire council) are allowed to contract loans upon the security of special rates, and have jurisdiction over pounds, commons, slaughter houses, &c.

The particulars of the cities, towns, boroughs, &c., formed at the end of 1873, are as follows:—

	Corporate Towns and Municipalities.	Shires and Road Districts.
Number	60	110
Estimated area (acres)	237,560	47,277,920
„ population	389,542	370,995
„ number of dwellings	87,269	79,880
	£	£
Estimated total value of rateable property	25,391,990	81,415,662
„ annual „	2,701,453	2,872,760
Revenue for the year 1869	410,508	529,426
Expenditure „	446,590	589,366

Boroughs as well as shires and road districts have hitherto received an annual grant from Parliament, but by two acts passed in 1863, provision is made for their endowment upon a system whereby the annual grants will gradually cease.

Number of Electors.—The number of these on the roll for the Legislative Council are 23,736, and for the Assembly 142,305.

At the last election of the former, out of 6,472 who were on the roll for three provinces that were contested, 3,500 voted, the per centage being 54·07.

For the Assembly at the election in 1871, 73,151 voted, out of 120,033, percentage being 65·02.

Accumulation.

There are ten banks of issue in Victoria, four being local institutions (Victoria, Colonial, National, and Commercial), the remaining six having proprietories outside the colony (Australasia; Union; English, Scottish, and Australian Chartered; Oriental; London Chartered; and New South Wales).

These banks were represented in the year 1873 at 231 branches or agencies.

They are regulated by Act 27 Vict., No. 194, under which each is compelled, under heavy penalties, to prepare and keep weekly statements, exhibiting the assets, property, credits and securities, as well as its debts, engagements, and liabilities, and from these statements to compile quarterly a general statement, setting forth its average assets and liabilities, capital and profit, which is sworn to by the manager, and published in the Government "Gazette." By this means the public are made acquainted with the exact financial position of each bank four times in the year.

In addition the Act further requires a copy of the charter of each bank, and a sworn list of the names and addresses of its proprietors to be recorded in the office of the registrar-general, which is available for inspection on payment of a small fee.

The average rates of exchange (1873) on bills drawn upon places without the colony were:—

London, par to 1¼ per cent. premium; India, 2*s.* 1*d.* per rupee; New South Wales, ¼ per cent. premium; Queensland, ½ to 1 per cent. premium; South Australia, ¼ to ½ per cent. premium; Tasmania, ¼ to ½ per cent. premium; New Zealand, ¼ to ½ per cent. premium.

In Table H is given the return of the banks for the last quarter of each year (1869-73).

Savings Banks.—These are under the control of five commissioners, who determine the rate of interest (the maximum not to exceed 4 per cent). In these commissioners are vested all deposits and securities.

There are eleven of these savings banks in the colony, and at tho end of their financial year (June, 1873) the depositors numbered 24,187, having to their credit 895,094*l.* 5*s.* 3*d.*, average being 37*l.* –*s.* 2*d.*

		£	*s.*	*d.*
Less than 20*l.*	13,725	68,369	11	4
Between 20*l.* and 50*l.*	4,275	136,153	7	2
„ 50*l.* „ 100*l.*	2,937	204,210	4	11
„ 100*l.* „ 150*l.*	1,669	203,439	15	9
„ 150*l.* „ 200*l.*	1,282	204,850	7	7
Upwards of 200*l.*	299	78,070	18	8
	24,187	895,094	5	5

Decennial Return of Savings Banks, 1864-73.

Years.	Number of Depositors.	Total Amount of Depositors' Balances.	Average Amount of Depositors' Balances.		
			£	*s.*	*d.*
1864	17,201	769,681	44	15	–
'65	17,948	719,100	40	1	4
'66	16,985	642,029	37	16	–
'67	17,258	606,438	35	2	9
'68	18,150	639,769	35	5	–
'69	19,628	735,140	37	9	1
'70	20,561	767,597	37	6	8
'71	21,015	764,236	36	7	4
'72	22,621	862,308	38	2	5
'73	24,187	895,094	37	–	2

A great reduction will be noticed in 1866-67, but this may be accounted for by the passing of the Post Office Statute of 1865 (29 Vict., No. 277), establishing post office savings banks, limited also to a maximum of 4 per cent.

By the close of 1873 140 offices had been opened, and Table H shows the results of each year's working.

Besides these two descriptions of savings banks, there are also in operation several private institutions for the deposit of savings, where rates of interest varying from 5 to 10 per cent. are given. Several of the most successful building societies also receive deposits for fixed periods.

Interchange.

The most important subdivision of this is that of imports and exports, and deserves more space than can be given in this paper.

Tables K and L give the imports and exports for the decennial period 1864-73, distinguishing whether British, colonial, or foreign.

At the last year (1873), taking the population at 790,492, the imports were 20*l.* 18*s.* 4*d.* per head, and exports 19*l.* 7*s.* 2*d.*

In Tables M and N I have enumerated the value of the principal articles in the years 1864, 1867, 1870, and 1873, and a reduction will be noticed in some of these since 1864. This may probably be owing to the alteration of the tariff in 1866, whereby certain imports, capable of being produced or manufactured in the colony, were made subject to a duty.

It cannot but be observed that wool, next to gold, is the staple article of export. In 1851 the quantity of wool exported amounted to 16,345,468 lbs., value 734,618*l.*, while in 1873 it had increased to over 74,893,882 lbs., value 5,738,638*l.*

The total amount of wool exported from the foundation of the colony has been over 927,000,000 lbs., of the value of upwards of 65,000,000*l.* sterling.

Since the discovery of gold in 1851, no less than 43,258,205 ounces have been exported, the value of which at 4*l.* per ounce would amount to 173,032,821*l.*

Post Office.—A most efficient postal system exists in the colony, and the number of post offices in 1873 was 764. In that year upwards of 14,475,000 letters, 6,080,000 newspapers, and 707,000 packets passed through the post. Table O gives the number of letters and newspapers and the income and expenditure for the years 1864-73.

The money order system has been extended to 204 post offices in Victoria, and in 1873 113,135 orders were issued and 109,048 paid, amounting to 341,961*l.* and 348,019*l.* respectively.

The first line of electric telegraph in the southern hemisphere was laid (1853) from Melbourne to Williamstown, since which the system has been extended, not only between the metropolis and every important town in the colony, but has been carried over the borders and connected with all the colonies except New Zealand.

The Victorian lines were all constructed and are still worked by the Government. At the end of 1873 3,928 miles had been opened, and the number of messages and amount received in the year 1860-69 will be found in Table P.

Railways.—The above, except a small suburban line, are the property of the State, and are worked by Government officials. They were all constructed by the Government, with two exceptions.

The particulars of the lines are as follows:—

	Miles Opened.	Cost of Construction.	Cost per Mile.
Victorian Railways—		£	£
Melbourne, Sandhurst, and Echuca.... " Geelong, and Ballarat .... Williamstown Branch	360	10,815,880	30,212
Melbourne and Hobson's Bay United Railway—			
Melbourne, Sandridge, and St. Kilda " Windsor, and Brighton . " and Hawthorn	17	859,979*	50,587

* This represents the total cost to the United Company. The absolute cost was 1,289,284*l.*, the difference being the loss sustained by the former companies.

	Miles Run in 1873.	Passengers.	Total Cost of Rolling Stock.
			£
Victorian railways	1,354,131	1,720,814	750,000
Melbourne and Hobson's Bay railways	412,586	3,003,233	182,217

Religious, Moral, and Intellectual Progress.

Of churches and chapels there are, 1,464; of school-houses there are, 249; of dwellings there are, 571; total, 2,284.

Of which there are—Church of England, 407; Roman Catholic, 315; Presbyterian, 553; Wesleyan, 736; other Christians, 266; Jews, 7; accommodation being afforded for 368,890.

The number of Sunday schools connected with all the denominations is 1,390, the average number of scholars attending being 111,973, who are instructed by 11,851 teachers.

Melbourne University.—This was established under a special Act (16 Vict., cap. 34), which provided for the appointment of a council, the constitution of the senate, and also for the endowment of 9,000*l.* annually out of the general revenue of the colony. It further provided that no religious test should be administered to any one to entitle him to be admitted to the privileges and advantages of the university. All degrees are recognised as academic distinctions and rewards of merit, and are entitled to rank, precedence and consideration in the United Kingdom and in British Colonies and possessions throughout the world, as fully as if they had been granted by any university in the United Kingdom.

Number of Graduates since Foundation of University.

Degrees.	Direct.	Ad Eundem.	Total.
Bachelor of Arts	80	46	126
Master "	49	58	107
Bachelor of Medicine	21	6	27
Doctor "	10	57	67
Bachelor of Laws	25	5	30
Doctor "	1	9	10
Total	186	181	367

Schools.—Prior to the year 1862, two systems of education (denominational and national) were supported by the State, but these are now blended into one system, under the Commons School Act (25 Vict., No. 149).*

The general provisions of the Act are carried out by a board of five, it being provided that no two members of the board are to be of the same religious denomination.

The duties of the board are to frame regulations for the distribution of the annual grants, to fix in what localities schools should be established and maintained, the examination and classification of teachers, to determine upon the course of secular instruction to be adopted, and to fix fees for payment by parents, &c.

No school is allowed to receive aid from the revenue until it has an average attendance of twenty pupils, no religious test is provided for, and it is compulsory that four hours be devoted daily to secular instruction.

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* This system has since been repealed by Act 36 Vict., No. 447, an Education Department having been specially organised, consisting of a Minister of Public Instruction (who must be a responsible minister of the crown), a Secretary Inspector-General, and other officials.

All property vested in or belonging to the Board of Education is now vested in the minister and his successors.

State schools may be established, extended, and maintained in such places as may be deemed desirable, secular instruction only to be given for not less than four hours daily.

All children of not less than 6 years, nor more than 15 years, must attend school for a period of sixty days in each half year, unless a reasonable excuse is given. Parents or guardians neglecting to do so may be summoned and fined.

School districts may be constituted and defined by the Governor in Council, and boards of advice (of not less than five nor more than seven persons) elected by the ratepayers, such board holding office for three years.

For the free instruction of all children attending school in the following subjects:—Reading, writing, arithmetic, grammar, geography, drill, gymnastics, and sewing and needlework in addition for girls—teachers of State schools are to be paid such salary and remuneration by way of results as shall be fixed by regulations. For instruction in other branches fees are to be charged to the parents.

The Governor in Council being empowered to make and rescind regulations for the more effectual working of the Act.

The number of common schools at the end of 1873 was 1,078, attended by 207,826 pupils (109,560 males and 98,266 females), who were instructed by 3,149 teachers.

The amount expended for these common schools in 1873 was as follows:—

Government aid for salaries, 180,559*l.*; books, rent, &c., 55,371*l.*; payment for results, 102,249*l.*; local contributions, 6,174*l.*; total expenditure, 344,353*l.*

In addition to those mentioned above there are:—

	Number.	Teachers.	Scholars.
Private Schools	646	1,381	17,198
Grammar "	7	65	1,230
	653	1,446	18,428

None of these institutions receive any aid from the State, but certain sums were granted some years since towards the erection of two of the grammar schools.

Table Q gives the numbers attending each class of schools, 1864-73.

Libraries, &c.—The inhabitants of Melbourne have the use of a public library, erected at the expense of the state, where upwards of 80,000 volumes are available for reading by any one on signing his name and address. In 1873 it was visited by 229,362 persons.

In addition to this there are other mechanics' institutions, free libraries, &c., in most of the principal towns.

One hundred and twenty of these institutions furnished returns in 1873 to the registrar-general, showing that the cost of erection had been 83,963*l.*, that the Goverment had aided them to the extent of 46,666*l.*, and the private contributions amounted to 144,155*l.* Number of volumes being 162,000.

Charitable Institutions.—These are numerous, many being subsidised by the State, and also largely contributed to by private contributions. A few particulars respecting these I have appended in Table R.

Production.

Crown Lands.—In 1873 529,308 acres were sold, realising 621,471*l.*, an average of 1*l.* 3*s.* 6*d.* per acre.

Out of the area of the colony (56,446,720 acres) only 9,397,849 acres had been sold or granted to that date, leaving 47,000,000 still for disposal.

The total amount realised from the commencement of the first sales to the date named (1873) has been 16,207,093*l.*, the average price being 1*l.* 14*s.* 6*d.* per acre.

Squatting Runs.—The number of squatting runs are estimated at 894, embracing 25,830,641 acres, of which 1,959,394 have been purchased, the remainder being held under annual licences for pastoral purposes; the rent paid being 2*s.* yearly for every head of cattle or horses the run can depasture. The rent for 1873 amounted to 140,786*l.*, at the rate of 1·308 of a penny per acre.

The agricultural statistics are collected yearly, the cost being defrayed by an annual vote of Parliament. The information obtained is given voluntarily, and the year ends on the 31st March, at which time the previous season's crops are secured.

The principal crops are wheat, oats, barley, potatoes, hay, and green forage.

In 1873 964,996 acres are enumerated as being under cultivation, viz.:—

	Acres.	Producing.
		Bshls.
Wheat	349,976	4,752,289
Oats	110,991	1,741,451
Barley	25,333	502,601
Other cereals	16,910	247,367
		Tons.
Potatoes	38,349	109,822
Other green crops	2,840	44,853
Hay	115,672	147,398
Green forage	213,069	—
		cwts.
Tobacco	583	3,964
Vines	5,222	—
Other crops	3,002	—
Gardens and orchards	16,060	—
Fallow	66,989	—

In Table S I have given the return for ten years, the number of acres cultivated, produce raised, and the average produce per acre, as regards wheat, oats, barley, potatoes, and hay.

The highest produce of wheat was 22·3 bushels per acre, in 1867, the lowest 10·10 bushels, in 1873.

The average weight per bushel in 1873 was:—wheat, 61lbs.; oats, 40 lbs.; barley, 51 lbs.; maize, 56 lbs.

In addition to other minor crops, such as maize, rye, peas, turnips, onions, &c., considerable attention has also been paid to the cultivation of the vine which is steadily increasing.

In 1857 only 280 acres were returned, while in 1874 the figures given are 5,222 acres, consisting of over 9,000,000 of vines, producing 105,650 cwt. of grapes, 85,279 of which were made into wine (562,713 gallons), brandy (100 gallons).

Besides the vineyards 9,912 acres were cultivated as gardens and 6,148 as orchards.

Live Stock.—The quantity of the above has increased by nearly 6,000,000 since 1860, and in Table T it will be observed that in 1873, sheep numbered, 11,323,080; cattle, 883,763; horses, 180,342; pigs, 160,336; total, 12,547,521; against in 1860, 6,641,023.

Returns for 1873 were procured from the following establishments:—

Manufactures.—Attempts are made every year to secure returns of the manufactories and works in operation, but owing to considerable difficulty in obtaining particulars from every establishment, the details must be looked upon as incomplete.

Breweries, 106; flour mills, 157; stone quarries, 170; potteries and brickyards, 290; other works, 1,255; total, 1,978.

Breweries—		
Number of hands employed		988
„ horses „		687
Materials used in the year—Sugar	lbs.	9,656,379
„ Malt	bshls.	931,521
„ Hops	lbs.	985,521
Beer made during the year	galls.	13,539,680
		£
Approximate value of machinery and plant		167,827
„ lands		82,919
„ buildings		209,982
Flour Mills—		
Number of mills		157
„ steam engines employed		146
Amount of horse power „		2,940
Number of pairs of stones in operation		470
„ hands employed		725
Grain operated on—Wheat	bshls.	5,078,368
„ other grain	„	76,099
Flour made	tons	108,477
Meal „	„	4,238
		£
Approximate value of machinery and plant		231,983
„ lands		52,162
„ buildings		190,030

In the stone quarries, 697 hands were employed, and the amount of stone operated on exceeded 429,000 tons, the value of that being 79,822*l.*, the machinery, lands, and buildings being valued at 42,175*l.*

The brickyards employed 1,325 persons, who made 79,000,000 of bricks, valued at 153,051*l*; pottery, 19,526*l*; the value of all the plant, &c., being estimated at 134,874*l.*

Of the 1,255 other works, 284 are connected with or dependent upon agriculture; 229 working on raw material, the production of the pastoral interest; 153 manufactures of food (of which the raw material is not the produce of agriculture) and of articles of drink; 201 building materials; 111 brass, iron, lead, &c.; 28 steam printing establishments; 34 clothing manufactories; 21 boot manufactories; 14 dye works; 13 gas works; 11 ship and boat builders; 156 miscellaneous. Amount of horse power employed, 8,802; number of hands employed, males, 17,596; females, 3,861; approximate value of machinery and plant, 3,217,124*l.*; lands, 587,545*l.*; buildings, 1,028,483*l.*

Mining Machinery.—The various machines used in gold mining in 1873 numbered 5,699, approximate value being 2,131,188*l.*

Vital Statistics.

During the decennial period 1864-73 the total number of births registered was 265,490; of deaths, 106,734; the addition to the population by natural increase being 158,756. (Table Y.)

The number of marriages in the same period was 46,411. Out of the 4,974 marriages in 1869, 103 men and 1,434 women had not attained the age of 21, and even 330 of the latter were under 18.

Meteorology.—From its geographical position, Victoria enjoys a far more genial climate to Europeans than any portion of Australia. The weather is never severely oppressive, except during the prevalence of hot northerly winds, and these occur only at intervals during the summer months.

The annexed table gives, during each of the years 1864-73, the highest, lowest, and mean temperature in the shade, mean atmospheric pressure, with the number of days on which rain fell and the amount of rainfall.

Year.	Temperature in the Shade.			Mean Atmospheric Pressure.	Days on which Rain Fell.	Amount of Rainfall.
	Maximum.	Minimum.	Mean.			
1864	96·6	30·5	57·0	29·945	153	27·398
'65	103·4	30·9	56·5	29·936	139	15·920
'66	108·2	28·0	57·8	29·954	107	22·410
'67	108·4	29·7	57·7	29·918	133	25·790
'68	110·0	27·4	57·1	29·977	120	18·270
'69	108·4	27·0	57·2	29·938	129	24·586
'70	109·0	29·6	57·4	29·930	129	33·764
'71	106·0	32·1	57·7	29·925	125	30·170
'72	103·3	32·5	57·6	29·923	136	32·521
'73	102·4	30·2	58·0	29·944	134	25·610

APPENDIX.

TABLE A.—*Revenue Derived from the following sources.*

	1869.	1870.	1871.	1872.	1873.
	£	£	£	£	£
Customs—					
Spirits	445,220	455,692	222,820	475,427	476,858
Wine	38,249	28,106	17,560	34,825	26,047
Beer and cider	28,170	23,212	12,235	26,726	28,953
Tobacco and snuff	143,889	127,147	62,340	131,604	128,033
Cigars	13,469	10,771	5,597	12,580	15,058
Tea	64,552	59,522	42,279	56,575	67,297
Sugar and molasses	77,540	74,923	57,713	71,376	82,835
Coffee, chicory, &c.	14,215	12,509	13,348	7,726	13,887
Opium	24,273	24,542	12,043	15,995	17,555
Rice	14,567	11,210	6,689	18,578	19,375
Hops	9,741	8,188	5,007	9,840	10,657
Malt	5,899	8,053	2,663	17,319	18,643
Wharfage rates	104,746	90,490	44,642	86,306	101,034
Articles subject to *ad valorem* duties	—	—	—	306,151	409,030
All other duties	463,858	384,601	191,515	282,860	258,486
Total Customs	1,448,394	1,318,974	696,458	1,553,897	1,673,757
Excise—					
Spirits distilled in Victoria	43,176	34,877	14,857	32,448	31,036
Auctioneers' licenses	5,899	4,743	2,270	5,804	6,214
Publicans' licenses	8,993	8,006	1,018	1,175	—
Duties on estates of deceased persons	—	—	—	—	50,416
All other licenses	5,553	5,710	1,869	3,496	4,505
Total excise	63,622	53,337	20,016	42,924	92,172
Territorial—					
Land sales, fees, licenses and leases of mineral rights	742,813	752,674	325,888	877,570	667,373
Public Works—					
Railway	596,923	544,414	256,555	616,642	684,998
Water supply	63,128	67,850	33,041	80,406	88,529
Tolls	512	401	216	621	885
Total public works	660,564	612,666	289,813	697,670	774,413
Ports and Harbours—					
Tonnage	18,668	17,872	7,786	15,821	18,125
Postage—					
Postage and money orders	125,700	125,630	63,118	134,218	140,252
Telegraph	31,993	30,784	14,997	36,937	40,520
Total postage	157,693	156,414	78,115	171,255	180,772
Fees and Fines—					
Supreme and other courts	77,749	86,838	43,022	120,094	94,594
Miscellaneous	40,817	72,249	36,549	123,810	142,827

TABLE B.—*Public Debt.*

Year.	Amount Due on 31st December of each Year.				
	Loan to Supply Water to Melbourne and Suburb.	Loan to Purchase the Rights of the Melbourne, Mount Alexander, and Murray River Railway Companies.	Loan to Construct Railways.	Loan for Water Supply, Defences, Graving Dock, and other Public Works.	Total.
	£	£	£	£	£
1864	443,000	67,800	7,933,170	—	8,443,970
'65	381,800	67,800	8,162,645	10,000	8,622,245
'66	331,800	67,800	8,345,255	100,000	8,844,855
'67	263,000	67,800	8,550,000	600,000	9,480,800
'68	200,000	67,800	8,550,000	600,000	9,417,800
'69	150,000	67,800	9,138,600	1,029,500	10,385,900
'70	100,000	67,800	10,657,000	1,100,000	11,924,800
'71	50,000	67,800	10,657,000	1,220,000	11,994,800
'72	—	67,800	10,657,000	1,260,000	11,984,800
'73	—	—	10,669,193	1,776,529	12,445,722

TABLE C.—*Population.*

Date.	Males.	Females.	Total.	Number of Houses.			
				Inhabited.	Uninhabited.	Building.	Total.
25th May, 1836	142	35	177	—	—	—	—
8th Nov., „	186	38	224	—	—	—	—
12th Sept., 1838	3,080	431	3,511	—	—	—	—
2nd Mar., '41	8,274	3,464	11,738	1,465	25	—	1,490
2nd „ '46	20,184	12,695	32,879	5,070	128	—	5,198
2nd „ '51	46,202	31,143	77,345	10,866	69	—	10,935
26th Apr., '54	155,876	80,900	236,776	—	—	—	—
29th Mar., '57	264,334	146,432	410,766	96,662	4,724	615	102,001
7th Apr., '61	328,651	211,671	540,322	129,196	5,017	119	134,332
7th „ '71	401,050	330,478	731,528	150,618	6,997	866	158,481*

* Constructed of brick or stone	33,461
„ wood, iron, &c.	101,635
„ canvas, bark, &c.	21,155
Unspecified..	2,230
Total	158,481

TABLE D.—*Birthplaces*, 1871.

Where Born.	Males.	Females.	Total.	Percentage.
Victoria	165,573	164,024	329,597	45·06
Other Australian colonies	14,308	14,361	28,669	3·92
England	97,796	66,491	164,287	22·46
Wales	4,189	2,425	6,614	0·90
Scotland	31,475	24,735	56,210	7·69
Ireland	49,198	51,270	100,468	13·73
Other British possessions	2,641	1,229	3,870	0·53
United States	1,776	647	2,423	0·33
Foreign countries	31,416	3,396	34,812	4·76
At sea	1,095	969	2,064	0·28
Unspecified	1,583	931	2,514	0·34
	401,050	330,478	731,528	—

TABLE E.—*Religions*, 1871.

Denomination.	Males.	Females.	Total.	Proportion per Cent.	
				1871.	1861.
Church of England	143,232	114,603	257,835	32·25	39·25
Presbyterians	60,695	52,288	112,983	15·45	16·12
Wesleyans	48,144	46,076	94,220	12·88	8·61
Independents	9,359	8,832	18,191	2·49	2·36
Baptists	8,156	8,155	16,311	2·23	1·67
Lutherans	7,206	3,353	10,559	1·44	1·86
Unitarians	661	355	1,016	0·14	0·26
Society of Friends	207	126	333	0·05	0·05
Calvinist	855	577	1,432	0·20	0·62
Other Protestants	2,387	2,274	4,661	0·62	0·23
Roman Catholics	86,406	84,214	170,620	23·32	20·33
Apostolic Church	142	136	278	0·04	—
Greek Church	305	27	332	0·05	0·04
Israelites	143	142	285	0·04	0·07
Mormons	78	19	97	0·01	0·02
Jews	2,010	1,561	3,571	0·49	0·54
Mahomedans	124	1	125	0·01	0·04
Pagans	17,620	30	17,650	2·41	4·85
Other sects	391	226	617	0·08	—
No denomination	1,880	857	2,737	0·37	0·18
„ religion	1,531	619	2,150	0·29	0·08
Unspecified	3,193	2,367	5,560	0·76	1·18
Objecting to state	6,325	3,640	9,965	1·36	2·14
	401,050	330,478	731,528	—	—

TABLE F.—*Immigration and Emigration*, 1838-73.

Year.	Immigrants.					Emigrants.		
	Total Number.	Males.	Females.	Un-assisted.	Assisted.	Total Number.	Males.	Females.
1838-59	632,971	452,483	180,488	518,112	114,859	243,837	201,357	42,480
'60........	29,037	19,566	9,471	27,301	1,736	21,689	17,220	4,469
'61........	26,912	18,491	8,421	24,230	2,682	35,898	30,914	4,984
'62........	37,836	28,434	9,402	33,108	4,728	38,203	31,043	7,160
'63........	38,983	26,141	12,842	30,361	8,622	34,800	27,929	6,871
'64........	36,156	25,427	10,729	29,525	6,631	21,779	15.758	6,021
'65........	30,976	21,234	9,742	25,872	5,104	25,292	19,105	6,187
'66........	32,178	22,920	9,258	27,984	4,194	27,629	20,772	6,857
'67........	27,242	18,914	8,328	24,040	3,202	25,142	18,472	6,670
'68........	32,805	24,283	8,522	29,934	2,871	25,552	19,639	5,913
'69........	33,570	23,355	10,215	29,854	3,716	22,418	16,371	6,047
'70........	32,554	22,202	10,352	28,213	4,341	21,087	15,228	5,859
'71........	28,333	19,289	9,044	25,121	3,212	19,951	14,189	5,762
'72........	27,047	19,056	7,991	25,954	1,093	25,295	18,685	6,610
'73........	29,460	20,805	8,655	28,597	863	26,294	18,335	7,959
	1,076,060	762,600	313,460	908,206	167,854	614,866	485,017	129,849

Note.—The immigration and emigration referred to in the above is all by sea.

TABLE G.—*Return of the Banks for the Quarter ending* 31*st December, in Years* 1869-73.

	1869.	1870.	1871.	1872.	1873.
Liabilities—	£	£	£	£	£
Notes in circulation....................	1,287,535	1,212,792	1,249,213	1,327,374	1,452,907
Bills ,, ...	116,171	112,656	121,503	90,523	79,097
Balances due to other banks ...	202,533	133,096	133,017	219,223	280,459
Deposits bearing interest	6,501,159	7,822,090	7,527,599	6,992,233	6,818,814
,, not ,, ...	3,849,176	3,076,935	3,831,317	5,305,692	5,461,736
	11,956,575	12,357,571	12,862,650	13,935,047	14,092,995
Assets—					
Coined gold, silver, and other metals	1,880,430	1,773,957	2,385,349	2,708,389	2,435,238
Gold and silver in bullion or bars	473,999	621,078	487,499	662,632	480,763
Landed property..................	584,088	616,038	635,868	635,808	653,137
Notes and bills of other banks	160,041	150,244	159,507	164,698	171,925
Balances due from ,,	236,504	230,177	313,408	354,079	319,024
Debt due to the banks...............	14,330,798	13,474,908	13,240,460	13,600,292	15,883,169
	17,665,861	16,866,405	17,222,092	18,125,902	19,943,959
Capital and Profit—					
Capital stock paid up	8,347,500	8,305,224	8,276,250	8,276.250	8,366,250
Average per annum of rate of last dividend declared by the bank	Per cnt. $9\frac{11}{20}$	Per cnt. $9\frac{2}{20}$	Per cnt. $9\frac{4}{20}$	Per cnt. $9\frac{8}{20}$	Per cnt. $10\frac{1}{16}$
Average rate per annum of interest paid to share-holders	10·830	10·054	9·920	10·193	10·746
Total amount of last dividend declared	£ 452,000	£ 417,500	£ 410,500	£ 421,800	£ 449,500
Amount of reserved profits after declaring dividend	2,208,509	2,127,770	2,091,991	2,171,705	2,311,064

TABLE H.—*Post Office Savings Bank,* 1865-73.

Year.	Number of Post Office Savings Banks.	Number of Accounts Opened during the Year.	Number of Accounts Closed during the Year.	Number Remaining Open at the end of the Year.	Deposits.			
					Number.	Amount, including Interest, during the Year.		
						£	s.	d.
1865…………	31	2,227	101	2,126	4,964	18,526	7	3
'66…………	50	5,703	1,055	6,774	25,909	86,570	16	4
'67…………	66	6,175	1,831	11,118	37,624	127,391	9	3
'68…………	73	6,540	3,302	14,356	45,408	188,551	3	9
'69…………	99	7,501	3,991	17,866	51,528	240,684	16	2
'70…………	112	7,973	4,662	21,177	57,241	251,674	13	–
'71…………	123	8,864	5,237	24,804	63,693	303,846	19	5
'72…………	130	11,458	6,134	30,128	74,842	538,219	18	–
'73…………	140	11,794	7,562	34,360	84,148	449,766	15	2

Year.	Withdrawals.				Balance Remaining at the end of the Year.					
	Number.	Amount.			Total.			Average to each Depositor.		
		£	s.	d.	£	s.	d.	£	s.	d.
1865…………	495	3,058	7	9	15,467	19	6	7	5	6
'66…………	6,204	43,348	4	11	58,690	10	11	8	13	3
'67…………	10,657	83,006	10	–	103,075	10	2	9	5	5
'68…………	14,293	125,565	10	7	166,061	3	4	11	11	4
'69…………	16,435	163,267	4	–	243,478	15	6	13	12	7
'70…………	20,622	215,603	4	2	279,550	4	4	13	4	–
'71…………	22,213	229,871	18	11	353,525	4	10	14	5	1
'72…………	26,406	348,314	15	7	543,430	7	3	18	–	9
'73…………	29,380	389,673	9	11	603,523	12	6	17	11	4

TABLE K.—*Imports. Decennial Return,* 1864-73.

Year.	Articles the Produce or Manufacture of			Total.
	The United Kingdom.	Other British Dominions.	Foreign States.	
	£	£	£	£
1864………	7,737,625	3,743,902	3,493,288	14,974,815
'65………	7,080,923	3,702,279	2,474,335	13,257,537
'66………	7,818,118	3,975,074	2,978,519	14,771,711
'67………	5,943,455	3,271,421	2,459,204	11,674,080
'68………	6,223,695	4,447,106	2,649,861	13,320,662
'69………	6,879,514	4,633,879	2,395,597	13,908,990
'70………	5,524,348	4,660,040	2,271,370	12,455,758
'71………	4,617,058	5,561,315	2,163,622	12,341,995
'72………	6,203,765	5,183,016	2,304,541	13,691,322
'73………	7,423,811	5,919,528	3,190,517	16,533,856

TABLE L.—*Exports. Decennial Return*, 1864-73.

Year.	Articles the Produce or Manufacture of				Total.
	Victoria.	The United Kingdom.	Other British Dominions.	Foreign States.	
	£	£	£	£	£
1864	10,211,564	1,525,108	1,225,477	936,235	13,898,384
'65	10,048,236	1,465,734	846,563	790,215	13,150,748
'66	9,433,473	1,531,039	1,270,730	654,304	12,889,546
'67	9,972,333	1,150,212	951,550	650,332	12,724,427
'68	11,697,893	1,061,598	2,197,596	636,903	15,593,990
'69	9,539,816	939,523	2,292,884	692,131	13,464,354
'70	9,103,323	781,784	2,025,036	559,871	12,470,014
'71	11,151,622	728,870	2,118,744	558,584	14,557,820
'72	10,758,658	1,062,161	1,408,493	641,883	13,871,195
'73	11,876,707	1,030,125	1,688,230	707,392	15,302,454

TABLE M.—*Value of Imports for the following Years.*

	1864.	1867.	1870.	1873.
	£	£	£	£
Apparel and slops	186,860	373,825	272,943	292,253
Beer and cider	335,019	297,103	222,706	209,772
Boots and shoes....................	572,410	256,524	303,437	275,631
Butter and cheese	116,742	64,286	67,805	4,299
Candles	183,360	203,821	130,490	107,361
Coals	174,579	145,075	163,994	245,596
Cottons	27,722	458,644	361,139	638,147
Flour	574,957	43,417	2,707	2,759
Grain of all kinds	954,991	509,725	474,732	622,245
Haberdashery and drapery	2,418,483	274,862	280,627	338,998
Hardware and ironmongery	366,133	97,405	107,790	81,844
Hosiery	9,232	123,193	111,028	144,456
Iron and steel........................	390,860	317,901	380,790	495,041
Live stock	215,881	590,346	613,387	842,988
Machinery	68,447	68,077	90,958	98,496
Oilmen's stores	180,246	69,552	159,348	26,445
Provisions	134,991	96,707	14,369	7,280
Silk	68,055	119,974	196,960	293,043
Specie	980,992	1,081,760	487,710	107,973
Stationery	244,916	83,515	67,899	71,753
Sugar and molasses	638,286	866,006	958,926	1,304,631
Spirits	484,702	420,665	384,664	405,302
Tea	519,287	516,344	496,623	757,591
Timber	318,122	217,744	223,767	588,498
Tobacco, cigars, &c.	728,477	297,480	222,268	334,460
Wine	261,642	163,154	128,983	173,282
Woollens................................	191,551	948,548	817,087	913,648

TABLE N.—*Value of Exports for the Year.*

	1864.	1867.	1870.	1873.
	£	£	£	£
Gold	6,206,237	5,738,993	6,119,782	5,168,614
Specie	1,033,678	673,018	584,860	1,117,175
Hides	94,551	26,775	11,508	6,137
Live stock	216,687	99,499	41,131	103,630
Skins	9,074	4,683	22,141	47,522
Tallow	60,230	34,968	358,863	233,091
Tea	209,530	185,515	165,986	269,794
Wool	3,250,128	3,824,956	3,205,106	5,738,638
Preserved provisions	5,279	5,864	151,800	242,183
Leather	51,679	71,663	111,871	220,443

TABLE O.—*Post Office*, 1864-73.

Year.	Number of Post Offices in Colony.	Number of Letters Despatched and Received.	Number of Newspapers Despatched and Received	Number of Packets Despatched and Received.	Total.	Income.	Expenditure.
						£	£
1864	475	6,790,244	5,671,545	—	12,461,789	137,214	126,540
'65	525	7,485,808	6,037,529	—	12,523,337	135,855	129,491
'66	555	8,631,133	5,438,388	315,205	14,384,726	127,327	139,632
'67	583	9,567,990	4,907,819	286,753	14,662,462	111,193	150,417
'68	633	9,749,716	4,974,102	324,143	15,047,961	116,212	158,083
'69	651	10,582,711	5,251,327	376,039	16,210,077	161,403*	189,708
'70	677	11,133,283	5,287,482	413,286	16,834,051	159,741	204,476
'71	706	11,716,166	5,172,970	469,547	17,358,683	165,543	213,696
'72	733	12,941,095	5,490,772	556,486	18,988,353	182,773	238,090
'73	764	14,475,085	6,080,007	707,316	21,262,408	191,357	260,312

* The electric telegraph having been incorporated with the post office in 1869, the figures include the income and expenditure of both departments.

TABLE P.—*Electric Telegraph. Decennial Return*, 1864-73.

Year.	Number of Stations.	Number of Miles of Wire.	Number of Telegrams.			Amount Received.
			Paid.	Unpaid.	Total.	
						£
1864	70	2,626	184,441	71,939	256,380	29,121
'65	79	3,110	210,777	68,964	279,741	34,770
'66	78	3,110	214,281	63,506	277,788	35,285
'67	83	3,171	175,761	59,887	235,648	28,875
'68	86	3,171	197,415	56,873	254,288	31,058
'69	91	3,368	218,832	57,910	276,742	34,193
'70	95	3,371	393,964	60,634	454,598	33,145
'71	96	3,472	473,521	63,877	537,398	36,941
'72	117	3,634	554,315	85,645	639,960	42,617
'73	135	3,928	593,848	124,319	718,167	45,322

TABLE Q.—*Public and Private Schools.*

Year.	Schools Receiving Aid from the Revenue.				Private Schools.			
	Number of Schools.	Number of Scholars.			Number of Schools.	Number of Scholars.		
		Boys.	Girls.	Total.		Boys.	Girls.	Total.
1864....	647	31,450	25,532	56,982	300	4,120	5,043	9,163
'65....	694	34,353	27,862	62,215	386	5,539	5,845	11,384
'66....	730	36,582	29,455	66,037	476	7,064	8,128	15,192
'67....	780	39,634	32,161	71,795	605	8,740	10,801	19,541
'68....	802	42,471	34,774	77,245	628	8,729	11,910	20,639
'69....	839	66,223	55,541	121,764	883	13,483	16,597	30,080
'70....	908	67,225	56,160	123,385	959	14,028	16,940	30,968
'71....	988	71,247	59,898	131,145	1,062	15,421	18,710	34,131
'72....	1,048	73,826	62,136	135,962	888	11,186	13,595	24,781
'73....	1,078	109,560	98,266	207,826	653	8,400	10,028	18,428

TABLE R.—*Income and Expenditure of Charitable Institutions in* 1873.

	From Government.	From Private and other Sources.	Total Income.	Expenditure.	Patients.	
					In-door.	Out-door.
	£	£	£	£		
30 general hospitals 1 lying-in "	63,773	39,481	103,255	105,990	14,520	48,854
Benevolent Asylum and Immigrants' Home	25,136	13,492	38,628	43,205	10,384	56,239
Orphan asylum	13,846	5,759	19,605	21,896	1,181	1
5 lunatic asylums	82,881	2,822	85,704	—	2,497	—
Industrial schools	54,904	3,936	58,840	56,355	1,799	—
Deaf and dumb	1,615	1,014	2,629	2,512	120	—
Blind	830	1,950	2,780	3,462	104	—
Magdalen and Refuge..	1,170	6,178	7,348	7,850	184	—

TABLE S.—*Agricultural Statistics. Decennial Return*, 1865-74.

Year.	Wheat.			Oats.		
	Acres Cultivated.	Produce Raised.	Average Produce per Acre.	Acres Cultivated.	Produce Raised.	Average Produce per Acre.
		Bshls.			Bshls.	
1865....	125,040	1,899,371	15·20	144,303	2,694,415	18·70
'66....	178,628	3,514,227	19·70	102,817	2,279,468	22·20
'67....	208,588	4,641,205	22·30	129,284	3,880,406	30·00
'68....	216,989	3,411,663	15·70	125,345	2,333,472	18·60
'69....	259,804	4,229,228	16·30	114,936	2,258,523	19·70
'70....	288,514	5,697,056	19·75	144,791	3,761,408	25·98
'71....	284,167	2,870,409	10·10	149,309	2,237,010	14·98
'72....	334,609	4,500,795	13·45	175,944	3,299,889	18·76
'73....	326,564	5,391,104	16·51	125,505	2,454,225	19·55
'74....	349,976	4,752,289	13·58	110,991	1,741,451	15·69

Year.	Barley.			Potatoes.			Hay.		
	Acres Cultivated.	Produce Raised.	Average Produce per Acre.	Acres Cultivated.	Produce Raised.	Average Produce per Acre.	Acres Cultivated.	Produce Raised.	Average Produce per Acre.
		Bshls.			Tons.			Tons.	
1865....	7,648	124,849	16·30	31,172	59,825	1·90	85,146	97,740	1·10
'66....	6,887	153,490	22·30	31,644	83,166	2·60	97,902	96,101	1·00
'67....	9,915	299,217	30·20	32,403	88,880	2·70	92,472	161,243	1·70
'68....	15,982	324,706	20·30	35,831	117,787	3·30	108,373	140,592	1·30
'69....	19,222	292,665	15·20	36,204	79,994	2·20	112,282	122,800	1·10
'70....	28,115	691,248	24·53	41,216	127,645	3·09	140,435	224,816	1·60
'71....	19,646	240,825	12·26	39,026	127,579	3·27	163,181	183,708	1·13
'72....	16,772	335,506	20·00	39,064	125,841	3·22	103,206	144,637	1·40
'73....	21,251	443,221	20·86	38,517	132,997	3·45	121,375	159,964	1·32
'74....	25,333	502,601	19·84	38,349	109,822	2·86	115,672	147,398	1·27

TABLE T.—*Live Stock. Decennial Return*, 1864-73.

Year.	Sheep.	Cattle.	Horses.	Pigs.	Total.
1864........	8,406,234	640,625	117,182	113,530	9,277,571
'65	8,835,380	621,337	121,051	75,869	9,653,637
'66........	8,833,139	598,968	121,381	74,708	9,628,196
'67........	9,522,811	650,592	131,148	141,522	10,456,973
'68........	9,756,819	693,682	143,934	136,206	10,730,641
'69........	9,923,663	692,518	161,830	111,464	10,889,475
'70........	10,761,887	721,096	167,220	130,946	11,781,149
'71........	10,002,381	799,509	181,643	177,447	11,160,980
'72........	10,575,219	812,289	185,796	193,722	11,767,026
'73........	11,323,080	883,763	180,342	160,336	12,547,521

TABLE Y.—*Births, Marriages, and Deaths*, 1864-73.

Year.	Births.			Deaths.			Marriages.
	Males.	Females.	Total.	Males	Females.	Total.	
1864........	13.241	12,439	25,680	5,202	3,685	8,887	4,554
'65........	13,265	12,650	25,915	6,158	4,303	10,461	4.497
'66........	12,670	12,340	25,010	7,016	5,270	12,286	4,253
'67........	13,093	12,515	25,608	6,613	5,120	11,733	4.490
'68........	13,841	13,402	27,243	5,865	4,202	10,067	4,692
'69........	13,225	12,815	26,040	6,221	4.409	10,630	4,735
'70........	13,997	13,154	27,151	6,114	4,306	10,420	4,732
'71........	14,000	13,382	27,382	5,845	4,073	9,918	4 693
'72........	13,831	13,530	27,361	6,308	4.523	10,831	4,791
'73........	14,234	13,866	28,100	6,565	4.936	11,501	4,974

On the EXECUTIONS *for* MURDER *that have* TAKEN PLACE *in* ENGLAND *and* WALES *during the* LAST SEVENTY YEARS. *By* WILLIAM A. GUY, M.B., F.R.S., *Professor of Hygiène, King's College, London, Consulting Physician to King's College Hospital, and one of the Honorary Vice-Presidents of the Statistical Society.*

[Read at a Meeting of the Nineteenth Annual Congress of the National Association for the Promotion of Social Science, 11th October, 1875.]

IN a paper submitted to the Statistical Society in April, 1869, and printed at p. 159 of the Society's *Journal* for that year, I examined the relation of insanity to crime, and discussed the plea of insanity in criminal cases, chiefly by means of the facts recorded in the successive reports of the Home Office on "Judicial Statistics." In bringing these facts together I by no means exhausted all the information the reports contain on the topics of crime and insanity; and I now feel that by studying some simple order of facts, such as executions for murder, additional light may be thrown on those questions.

I am the more inclined to enter on this inquiry and record the results, inasmuch as we possess, in the case of executions for murder, a long series of well-defined and strictly comparable facts; for Mr. G. R. Porter, in his chapter on crime, in "The Progress of the Nation," has presented us with the number of persons executed for murder during the thirty-seven years from 1805 to 1841 inclusive, on the authority of Mr. Redgrave, to whom we are indebted for the compilation of the returns in "Judicial Statistics" up to a recent period;* and if we add to these returns the more recent ones to be found in the publication referred to in the note, and in successive numbers of the "Judicial Statistics," we shall be able to compile an unbroken series of facts relating to executions for murder in England and Wales, during no less than seventy years; of which facts a careful analysis can scarcely fail to yield us some useful information.

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* The Home Office has also issued a table, under date 22nd November, 1864, in which the number of executions for murder are given for the longer term of years from 1823 to 1862, in connection with a brief history of the legislation bearing on the death punishment. A few of the figures for the years embodied both in these tables and in those given by Mr. Porter, differ by a unit from his. I have assumed the document issued by the Home Office to be the more correct, and have accordingly adopted its figures. I am indebted to the officials of the Home Office for the facts relating to 1874 not yet published.

I have given the facts themselves in the first table of the Appendix, first as naked facts, and then as the number of executions which would have taken place had the population of England and Wales remained stationary at 20,000,000 of persons for each of the seventy years comprised in the table. The ratios are then brought together into groups of 2, 4, 6, 8, 16, and 32 years, and also into groups of 5 and 10 years.

The second table in the Appendix is compiled from the "Judicial Statistics," and records the executions for murder, for the thirty-nine years from 1836 to 1874, with additional particulars of a very instructive and suggestive character.

Of the naked facts embodied in the first table, suffice it to observe that they present an average of about 12 executions for murder per annum, a minimum of 4, and a maximum of 25; also such abrupt transitions as 4 executions one year and 15 the next, 5 one year and 16 the next. We are dealing then with facts relating to a large number of persons, embodied in low figures, subject to great fluctuations and quick transitions. But when we substitute ratios admitting of fair comparison for naked figures, we have a long series of facts from which we may hope to draw some important inferences.

Before, however, I proceed to state what these inferences are, I must premise that the figures in the table comprise all the executions for murder which have taken place in England and Wales; whether the crime was committed on the high seas or on land, by foreigners or natives, or by foreigners on foreigners; whether by persons born in England and of the English mixed race, or by Scotch, Irish, or Welsh settled in, or recently immigrating into, England. The few cases in which men or women have forestalled the executioner by committing suicide are also included in the tables.*

The first fact deserving notice in the column of ratios is the small number of executions for murder in England, and the small proportion which they form of the total charged with murder. The average number executed in the seventy years barely exceeded 16 in the 20,000,000, or much less than 1 per million of inhabitants, and these (as appears from Table II of the Appendix) were about 1 in 6 of the persons charged with the crime of murder.

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* The following figures, extracted from the successive numbers of the "Judicial Statistics," will give some idea of the foreign element, as directly stated, or inferred from names. There were, in the thirty-nine years ending 1874, 22 foreigners (including 2 Jews), 28 Irish, 12 Welsh, and 3 Scotch. In the cases of 238, the nationality may be set down as probably English. But it should be understood that in the earlier years of the thirty-nine the facts are recorded with great brevity. There were 13 executions for mutiny and murder on the high seas. There were also in the thirty-nine years under review, 14 concerted murders: comprising 2 mutinies, 1 Fenian and 1 Union conspiracy, and 4 murders during acts of burglary and robbery; and there were 19 multiple murders, involving the deaths of 48 persons, and the suicides of 2 of the murderers.

The second fact which arrests attention is the large number of executions that have taken place in some years compared with the small number in others. We have such figures as 43, 44, 47 to the 20,000,000 of inhabitants, contrasted with such numbers as 4, 5, and 6. This wide difference between the extremes has just been pointed out when speaking of the naked facts. It becomes wider when the ratios for 20,000,000 are substituted for the actual figures.

The third fact deserving of notice is the large fluctuation from year to year. It is well illustrated by contrasts at both ends of the table. Thus, the executions per 20,000,000, which were 10 in 1806, were 33, or more than three times as many, in 1807; while the low figure of 4 in 1871 became 13 in the year following.

These startling contrasts, with which we are all familiar when we are dealing with small numbers, even though they represent events occurring among large populations, slowly diminish if we gather our facts into groups of 2, 4, 8, 16, and 32 years, or of 5 and 10 years. This will appear in the following table:—

TABLE I.

	Maximum.	Minimum.	Range.	Range per Cent. of Maximum.
1 year	47	4	43	92
2 years	90	14	76	84
4 "	155	31	124	80
8 "	236	70	166	70
16 "	452	182	270	59
32 "	710	366	344	48
5 years	158	41	117	74
10 "	281	93	188	67

But though the contrasts lessen as the figures increase, they are very far from disappearing; for even when we throw the facts for sixty-four years into two groups of 32 each, we have the first group, comprising the years from 1809 to 1840, showing an aggregate of 710 executions; and the second group, comprising the years from 1841 to 1872, exhibiting a total of 366, a little more than half the larger figure; and we obtain a contrast not less remarkable if we divide the whole seventy years into two periods of thirty-five years each, for the first thirty-five years (from 1805 to 1839) yield 778 executions, and the second period (from 1840 to 1874 inclusive) yields 400 executions.

Here it may be well to repeat, that for the whole seventy years, the executions of which this paper treats are executions for murder only; so that it is not necessary to complicate this inquiry by reference to those amendments of the law by which, in 1832, 1833, 1834, 1835, 1837, 1841, and 1861, the punishment of death was abolished for a long catalogue of offences. This being well understood, it appears from the figures in the table (Table I of Appendix) that if we divide the whole period of seventy years into two of 35 the first period shows an aggregate of 778 executions, and the second of 400, or, if taken by the year, and in round numbers, of 22 executions per annum for 20,000,000 souls during the first thirty-five years, and of less than 12 executions during the second thirty-five.*

But it must be understood that these figures record the executions for murder that have taken place in England and Wales for seventy years past,† not the acts of extreme cruelty and violence which have been brought to trial. They do not enable us to measure the force of murderous passions, but only the fate which they have entailed on a fraction of the men and women who have indulged them; for an execution for murder may be said to be the final result of a series of eliminations to which the cases for trial have been successively subjected. The total of cases first suffers some diminution by the removal of those in which there was no prosecution, then a much larger abatement through the cases in which the grand jury found no bill. Next, we have to subtract that much larger category of cases in which the accused were found not guilty on trial. But the work of elimination does not end here. A certain number of the accused are acquitted as insane, and a smaller number are found or declared to be insane afterwards. The final elimination consists in the revising work of the Home Office, the last and not the least important of the whole.

The figures of the "Judicial Statistics" for the thirty-nine years (from 1836 to 1874) enable us to measure the force of these several processes, or steps, of elimination.

In those thirty-nine years 67 persons (male and female)‡ were left for trial, one year with another. These were reduced to 66 by failure to prosecute, and further reduced to 60 by cases in which no bill was found by the grand jury. Of the 60 cases that were brought to trial, 31, or more than a half, were acquitted. Of the remaining 29, 6 were acquitted as insane, and 3 more were subsequently found to be in that state, making 9 in all; leaving 20 to be sentenced to death, of which 11 were executed. These facts will be more clearly seen if I throw them into a tabular form:—

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* There is good reason to believe that the executions for murder a century ago were much more numerous in proportion to population than they are now; for John Howard in his work on "The State of Prisons" gives a table of the executions for murder at the Old Bailey for the twenty-three years ending 1771, from which it appears that, when reduced to the same standard of population, they were more than sevenfold more numerous than they have been for the twenty-three years ending 1871.

† There was one exception to this rule in 1841, it was a case of intent to murder with dangerous bodily injuries. After this date of 1841, the reports on "Judicial Statistics" become more precise and detailed.

‡ During the last twenty years the sexes have been distinguished in the tables of the "Judicial Statistics," and, taking one year with another, there are about 40 males and 26 females reserved for trial. The number of males executed is always in a much higher proportion. In the twenty-four years from 1850 to 1873 inclusive, there were only 13 executions of women, or scarcely one execution in two years.

TABLE II.

Average yearly number for trial		67
No prosecution	1	
Average yearly prosecutions	—	66
No bill found	6	
Left for trial	—	60
Acquitted on trial	31	
Found guilty	—	29
Acquitted, or found insane	9	
Sentenced to death	—	20
Not executed	9	
Executed	—	11

On these successive stages of elimination I proceed to offer a few remarks.

1. *No Prosecution.*—In this item great changes have taken place. The failures, which were numerous in the early years of the thirty-nine, have become rare in the later years. From 1836 to 1844 (a period of nine years) the figures ranged from 1 to 7, and reached a total of 26. In the remaining thirty years, the aggregate was only 14, and in no year, with the exception of 1867 (when the figure 6 occurs) was there more than one case of "no prosecution."

2. *No Bill Found.*—The operations of the Grand Jury, though fluctuating from year to year, have for groups of years shown great steadiness, with a marked tendency to express themselves by smaller figures of late years. Thus, if we divide the whole period of thirty-nine years into three of thirteen each, we find the first group, ending 1848, yielding the sum of 87 cases; the second group, ending 1861, also 87 cases; and the third group, ending 1874, 67 cases. When the actual figures are reduced to ratios of 20,000,000, the figures for the three equal periods of thirteen years become 107, 94, and 66. The fluctuations from year to year are, of course, in part determined by the number of cases for trial; but it is well worthy of remark that equal numbers in different years when submitted to the operation of the grand juries issue in very different figures. Thus (to take only one example) 70 cases for trial yielded in four different years 2, 4, 8, and 12 cases of "No Bill."

3. *Acquitted on Trial.*—Under this head the figures show a decided decrease for the third period of thirteen years, when we deal with the actual returns, and a progressive decrease if we substitute for the naked facts the ratios per 20,000,000. The figures are given in—

TABLE III.

	First Period of 13 Years.	Second Period.	Third Period.
Actual returns	429	438	345
Ratios per 20 millions	527	472	311

As a general rule, subject to very few exceptions, it may be observed that the acquittals were greatly in excess in the first half or more of the thirty-nine years, and the reverse in nearly all the years of the last half: or, if as before, we divide the whole period into three of thirteen years, and take the actual facts as reported, the first period comprises only two years in which the acquittals fell short of the convictions; the second period three years, and one in which acquittals and convictions were equal; while the third period, on the contrary, shows an excess of convictions over acquittals in every year but two. The amount of difference is shown in—

TABLE IV.

Acquittals in excess of convictions in—

First	13 years	by 113	cases in	119
Second	„	by 96	„	117

Convictions in excess of acquittals in—

Third	13 years	by 124	cases in	127

4. *Insane.*—Prior to the year 1836 we had no definite information on the subject of insane homicides. Since that date we have had exact returns, in "Judicial Statistics," both of the acquittals on the ground of insanity and of those subsequently found or declared insane. The facts under both heads are given in Table II of the Appendix, and the ratios for a constant population of 20,000,000 in Table III. In Table IV the actual numbers and the ratios are both given, and the ratios also in groups of years. In the first column in Table II of the Appendix the actual acquittals will be seen to fluctuate between 1 and 12; the ratios in Table III of the Appendix, between 1 and 14. In the second column (those subsequently found insane) there are two blank years, and two in which the actual figures reach the number 7; or 8 in the column of ratios.

In both columns the transitions from year to year are very striking. In the column of acquittals we encounter such figures as 12 followed by 5, 11 by 4, 10 by 3; the figure 2 of one year becomes 10 in the year following; and 6 or 7 is followed by 1. In the column of ratios (Table III of Appendix) these differences are slightly exaggerated. In the second column such figures as 6 and 1, and 8 and 1, are seen to follow each other. In the column of totals again, we have such figures as 9 and 2; such ratios as 11 and 2 in successive years.

The general results to which these figures lead us will be best seen in the following tabular arrangement:—

TABLE V.—*Insane, Grouped by Periods of Thirteen Years.*

Periods.	Actual Figures.			Ratios per 20 Millions.		
	Acquitted.	Found or Declared.	Total.	Acquitted.	Found or Declared.	Total.
1. (1836–48)	59	23	82	75	27	102
2. ('49–61)	84	47	131	90	50	140
3. ('62–74)	82	56	138	77	51	128
	225	126	351	242	128	370

The inferences to be drawn from the figures of this table, whether we deal with the actual figures or the ratios, are obvious. By the verdicts of juries fewer persons were acquitted as insane in the first thirteen years of the thirty-nine than in the last two periods of equal length, between which two periods the difference is but slight. On the other hand, there has been a progressive increase, strongly marked in the second period when compared with the first, comparatively small in the third period as compared with the second, in the numbers and ratios of persons found insane by inquiry after conviction. In the column of totals the difference, which is still considerable between the first and second periods, sinks to a much smaller figure when we compare the second period with the third.

In the column of ratios, the thirteen years ending 1861 occupy an intermediate position between the first and third periods; those found or declared insane showing an increase of one only in the third period when compared with the second.

But when we take into account both the numbers found insane and the numbers brought to trial (after elimination of the cases in which there was no prosecution and no bill found), we arrive at the conclusion that there has been a steady increase in the numbers acquitted as insane and subsequently found to be so. This will clearly appear from the following tabular comparison:—

TABLE VI.

	Thirteen Years.		
	First Period.	Second Period.	Third Period.
Cases brought to trial	733	797	785
Insane	23	47	56
Ratios	1 in 32	1 in 17	1 in 14

I shall return to this subject of insanity in connection with crime when I have noticed the results of the final process of elimination as conducted by the Home Office.

5. *Home Office.*—The 67 cases brought to trial for murder having, by the successive eliminations now passed in review, been reduced to 20, the appeals made to the Home Office are seen to issue in the reprieve of the same number of convicted persons annually as had already been acquitted or subsequently declared insane. The figures and ratios which show the result of this last appeal exhibit extremes widely separated, and abrupt transitions from year to year. If we take the ratios of executions for murder as the final result, we have such extremes as 19 and 4, such transitions as from 4 one year to 13 the next.

Having now made such comments as suggested themselves on the figures contained in the several tables which exhibit the executions for murder in England for the longer period of seventy and the shorter period of thirty-nine years, I proceed to treat more fully of the plea of insanity in criminal cases—one of the leading topics of the paper which I began by citing.

Insanity and Homicide.

Of the successive processes of elimination by which the 67 cases tried for murder are gradually reduced to 11 cases for execution, or the ratio of 72 per 20,000,000 souls to 12, by far the most interesting and important is that by which the insane are set apart and consigned to life-long detention in the lunatic asylum. This process of elimination is partly carried on in court, where those who present the most obvious signs of unsoundness of mind are acquitted by the verdict of the juries, and partly through a subsequent process of inquiry set on foot by the Home Office, and conducted by men experienced in the various forms of unsoundness, and able in all but a small minority of most difficult cases, belonging mostly to the class of imbeciles, to come to as sure a decision as if the disease was one of the body and not of the mind.

But it is well known that this skilled inquiry into the state of mind, instead of being extended, as it might be with advantage, to every homicide found guilty of the act of wilful killing, is limited to cases in which the whole public, or some influential or active section of it, can contrive to make its voice heard, and impress the Home Office with the necessity or expediency of further inquiry. That such cases of oversight are not rare will be inferred from a perusal of the brief notes of the cases left for execution inserted in the successive reports on "Judicial Statistics" for the last thirty years, and with more regularity for the last seventeen years. In this shorter term of years one case, on the average of each year, has been characterised by such comments as these:—"no apparent "motive" (or some equivalent remark), in 11 cases; insanity (or some expression clearly implying it), in 3 cases; delusion (constituting the form of insanity known as delusional), in 2 cases; without provocation (instinctive or impulsive insanity) in 1 case. In the seven years, from 1844 to 1850, when the account given of the cases was more meagre and the names of the parties are not stated, 3 cases are mentioned in which the motive is said not to have been apparent.

Though I would not go the length of asserting that all the cases in which the compilers of the "Judicial Statistics" take note of the apparent absence of motive ought to be set down as cases of unsoundness of mind, I do not hesitate to express my belief that the greater number do really belong to that category; and it is some justification of this opinion that, in course of abstracting the ascertained motives of the homicides made the subject of the brief comments just referred to, I found occasion to group no less than 48 under the head of "doubtful."*

Nor does it, I think, admit of doubt that, of the 14 homicides characterised in the reports as habitual drunkards, the 17 described as committing homicide under the influence of drink, and the single case in which both murderer and victim were drinking together (making 32 cases in all of men in whom drink played a conspicuous part in bringing about the fatal event), some, if not most, were persons of weak mind; for though there are doubtless cases in which drunkenness, indulged in by persons not originally unsound in mind, leads by degrees to insanity, it is equally certain that there are others in which indulgence in liquor is but one of the phases assumed by that general want of control that is part and parcel of the character of the *moral imbecile.* In order that the influence of drink in bringing about murderous assaults and conflicts may be rightly estimated, it should be understood that these 32 cases are those in which drink was the immediate antecedent of murder. How many of the murderers were men of intemperate habits does not appear.

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* Of 264 cases of homicide by men in which I was able to assign and classify the causes, I found that 80 came under the head of *Greed* (namely, murders committed in the act of robbing, or in order to steal); 52 of *Domestic Discord* (namely, quarrels between men and their wives, or women with whom they were living); 31 of *Revenge*; 28 of *Jealousy*; 13 of *Pique, Grudge*, or *Discouragement of Addresses*; 17 of *Brutality, Passion, and Quarrelling*; 8 of *Release from Burden* or *Obligation of Support*; 13 *To Conceal a Previous Crime or through Fear of its Consequences*; 5 through insane delusion; 4 while poaching; 1 as the result of a union conspiracy; 1 *In Escaping from Prison*; and 1 *To Marry Another*; 5 persons lost their lives in defending others against murderous attacks.

Again, there are many cases in the pages of the "Judicial "Statistics" not recognised by the compilers as cases of imbecility, which the great majority of men conversant with the unsound mind would, without hesitation, recognise as such.

At present it will suffice to observe that the renewed study of the "Judicial Statistics" to which I have pledged myself in this paper, has confirmed all that I knew before about this most important topic. In the paper to which I made reference at the beginning of this communication, I showed that the convicts recognised as imbeciles, or persons of weak mind, are by far the most dangerous members of the criminal community;* that they are peculiarly addicted to sexual vices and outrages, and to arson; and in a less degree (though still in excess of the healthy convict) to cattle stealing, homicide, and acts of violence. The agricultural interest has no worse enemy, no more ruthless levier of taxes, than these imbeciles. They figure largely among those who suffer the extreme penalty of the law, as well as among those who are acquitted or found insane.

I shall again suppose these imbeciles to be mixed up with the general body of the insane; and again, with the aid of a larger array of facts, open the question whether the admission of the plea of insanity in criminal cases, and the consequent substitution in certain instances of confinement for life for death on the scaffold, tends towards the encouragement of crime.

This is a question peculiarly amenable to the test of figures; and though the inferences which I drew from the facts recorded between 1836 and 1867 may be said to have answered it in the negative, I avail myself of this opportunity of submitting the question to the ordeal of a larger array of facts.

In doing so, I shall again assume that, if in the year following an execution of some notorious culprit, there is a falling off in the number executed, such falling off may be taken as a presumption that the execution in question exercised a discouraging or deterring influence, and *vice versâ;* and that if in the year succeeding the escape from the gallows of some notorious homicide there is an increase of executions, such increase would afford an equally strong presumption of an encouraging influence, and *vice versâ.*

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* See *Journal of Statistical Society,* June, 1869, p. 171.

As a necessary preliminary step to this inquiry, I must so far rectify the figures in Table I of the Appendix as to deduct from the total of executions in certain years, those of men who had been guilty of murder on the high seas. There were 3 such cases in 1856; 1 in 1857; 3 in 1858; 1 in 1862; and 5 in 1864. I have reduced the figures for those years, and shall, in what follows, make use of the smaller numbers.

I begin by constructing a table (Table V of Appendix) which presents at one view the executions and trials for murder in the year following the execution of fifteen notorious murderers, whose crimes and fates excited much public interest and discussion, compared with the number of executions and trials for murder in the year in which the respective crimes were expiated on the scaffold. To this I add five cases similarly treated, in which the plea of insanity was suffered to prevail, and the homicides were not executed. I will first summarise the results of these two groups of cases in a short table, and then offer a few comments upon them.

TABLE VII.

	Executions in Year following.		Trials for Murder in Year following.	
	Showing Increase.	Showing Decrease.	Showing Increase.	Showing Decrease.
Fifteen notorious criminals executed	in 8 cases	in 7 cases	in 6 cases	in 4 cases
Five notorious homicides not executed	,, 2 ,,	,, 3 ,,	,, 1 case	,, 4 ,,

If then we assume an increase of executions in any year following the death by hanging of some notorious criminal to imply an encouragement given to murderous acts, and a decrease to indicate discouragement, we have 8 cases showing encouragement in the form of an increase of executions, and 7 cases the reverse; while the cases for trial indicate encouragement in 6 instances, discouragement in 4; and if we take the aggregate of the figures in the two cases to be a fair measure of the intensity of the presumed forces (encouragement and discouragement), we have the first equal to 34 and the second to 28.

When we substitute for executions cases for trial, we have indications of encouragement in 6 cases, of discouragement in 4, and the force of the first measured by 129, of the second by 72.

If now we turn to the smaller group of 5 cases, in which the plea of insanity was suffered to prevail, and very notorious homicides were allowed to escape the punishment of death, we find 2 cases of encouragement set off against 3 of discouragement, and a force represented by a total of 7 nullified by one represented by 13. The contrast in the cases for trial is still more remarkable; for there is one case only of encouragement against 4 instances of the reverse, and a force of 3 neutralised by a force of 39.

It will be observed, on referring to the table, that the year 1845, in which Martha Brixey was not hanged, John Tawell was; and that 1865, the year of the non-execution of Constance Kent and George Broomfield, was also the year in which Dr. Pritchard died on the gallows.

The comparisons I have just instituted, if fairly considered and weighed one against the other, can lead to but one conclusion, namely, that the punishment of death has as little influence in deterring others from crime as the immunity from that punishment has in encouraging them, and that if the one or the other exercises such an appreciable influence either way as can be measured by figures, it is the immunity from death, and the substitution for it of imprisonment or detention for life.

But though the remission of the death punishment in a certain class of cases does not act as an encouragement to the would-be murderer, it does not follow that the retention of that punishment is inoperative as a deterrent; for let us suppose a man deliberately contemplating a murder, and weighing the probable consequences of his act, he must needs place before himself as the most probable result of detection the ignominious punishment of death on the scaffold, with the alternative of incarceration for life, if proved to be of unsound mind; or, in the event of some minor plea in extenuation being sustained, a sentence of penal servitude for a long term of years. These cases are of rare occurrence. But to the criminal class, both in prison and out of it, I believe that the death punishment acts as a deterrent.

The question of the expediency or otherwise of the death punishment is not materially affected by any of the facts brought forward in this paper, unless indeed it be that the fact of the small number of males, and still smaller number of females, now executed for murder, may be taken to prove the slight importance of the question compared with many other social problems now inviting solution, among which I wish again to specify those that attach to the treatment of our *imbecile population*. I shall presently refer to this important subject under a distinct heading: meanwhile I desire again to call attention to the facts stated in my paper already cited.* Those facts certainly gave some countenance to the belief that the number of insane homicides in a year was in part determined by the presence or absence of events exciting and agitating the public mind. I instanced the two cholera years, 1849 and 1854; 1857, the year of the Indian mutiny; 1862, the year of the cotton famine and second Great Exhibition; and five out of the seven years in which Parliamentary elections were held, as years in which also the number of insane homicides had increased when compared with the year preceding.

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* *Journal of the Statistical Society*, June, 1869, p. 184.

I am now able to add one case more to this last list. In 1868, an election year, there were twelve insane, and in the years preceding and following seven and eight respectively.

I will not pursue this matter further than to state that the figures I have brought forward afford a probability that the number of insane homicides is greater in years of public anxiety and excitement.

Criminal Imbeciles.

In the paper to which I have more than once referred, I adduced facts to show that the imbecile section of our population is unusually addicted to violent and destructive crimes, to sexual offences, to arson, to homicidal and violent acts, and to cattle stealing; and that imbeciles are more frequently engaged in acts of burglary than their want of ability might lead us to expect. These facts, it may be well to remind the reader of this paper, were the result of a census of the convict population, and of a strict comparison of the elements of which it consists with the records of the crimes for which the prisoners were undergoing punishment. There was, no doubt, on the day when the census was taken, that the convicts returned as weak-minded were really so, or that the crimes for which they were being punished were correctly abstracted from their caption-papers.*

Now these facts, which so strikingly illustrate the source of some of the crimes best calculated to alarm and disgust us, certainly derive support and confirmation from the figures I have just submitted. Insanity plays a conspicuous part in the terrible drama of homicide, and among the insane imbeciles abound.

It is obvious then that if we would look for any further diminution in the number of capital punishments, and, what is far more important, in the number of those who commit the crimes that entail them, we must set ourselves seriously to the work of securing the persons of our imbeciles, and placing them for life in asylums fit for their reception.

For practical purposes it may be asserted that two classes of imbeciles find their way into our convict prisons and county and

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[*] Some idea of the number and importance of the imbeciles and of the criminals most nearly allied to them, may be formed by means of the figures relating to the convict prison at Millbank. In the midsummer of 1869, there were in that prison 140 weak-minded and 65 epileptics, and also 25 convicts of an allied type not easily defined or described; they probably belonged to the dangerous class known among the mendicant-thieves as "*Half-sharps.*"

borough gaols, and sometimes to the scaffold. The members of the one class are stamped with imbecility in face and person, and in every word and act; those of the other class wear an expression of countenance which it requires some experience to recognise, are capable of sustained and intelligible conversation, and show their weakness of mind chiefly in the foolish and strange, and often violent, actions of an unsettled and wandering life. I have a very distinct recollection of at least three specimens of this class, concerning whom it was much more easy to say that they were of weak and unsound mind than to justify the opinion in any set form of words.

As to the proper mode of dealing with the first and largest class of imbeciles, there can be no manner of doubt. Their proper place is not the prison, the workhouse, or the highway, but the imbecile asylum; and there can be as little doubt that it is both the interest and duty of the State, and of all who recognise the misery, pecuniary loss, and public disgrace attendant upon the worst crimes, to provide the needful asylums without delay, and take the most prompt and practical measures for getting our imbeciles transferred to them.

Happily there is no sort of difficulty in recognising these imbeciles, nor any reason why well-educated and experienced medical men should not be implicitly trusted to certify them as insane. The duty might be safely entrusted to our medical officers of health throughout the country, without entailing any serious increase of expense. The smaller and more dangerous class cannot be recognised so easily, and would be most effectually dealt with by some legislative measure which should consign all habitual criminals, after the commission of a certain defined number of crimes, to detention for life. I have already taken one or two opportunities of pointing out the proper method of dealing with this large, costly, and dangerous community of imbeciles; and I will again endeavour to explain and enforce my views.

The time has come for us to take a large and comprehensive view of the criminal and dangerous classes. We know that they are at present to be found by tens of thousands infesting all our streets and highways, and haunting the worst houses and districts in all our towns: and by other tens of thousands in our prisons and workhouses; committed to prison after most expensive legal procedures, and detained there at great cost; and frequenting our workhouses at such times and seasons as suit their convenience. To our workhouses, too, as a matter of course, must needs gravitate all the worn-out crime of England.

In our county and borough gaols and workhouses we have ready to our hand the buildings which, with little outlay of money, might be adapted to all the reasonable uses that either crime or poverty suggest or entail. We want more lunatic asylums; we want asylums for idiots into which those unhappy and helpless beings may be drafted from the union workhouses; we want asylums for imbeciles quite as much in country parts as in the neighbourhood of London; and we want establishments in which the poor rightly so called, may be separated from the depraved destitute with whom they are now forced to associate. We want schools for the young and asylums for the old, in which the few poor may be separated from the many destitute by whom their morals are now being contaminated and their lives made miserable. Mr. Hastings has proved to us that many of our prisons are much too small to be efficiently and economically managed; and this fact has been further enforced, and illustrated by highly important details, in the able address of Colonel Du Cane, the President of this Section.* The same may be said with truth of some of our union workhouses. If a survey of all our prisons and workhouses by competent persons could be brought about, it would be easy to find some in every county and district which might at moderate cost be converted into lunatic, imbecile, and idiot asylums; into almshouses for the poor, and semi-penal establishments for the aged wrecks of the criminal population; into schools for poor children, and reformatories for those who have been all but hopelessly corrupted by early association with the criminal classes.

These suggestions, which might have sounded Utopian a hundred years ago, when railroads were not even imagined, and when a Local Government Board had no existence, have, I submit, become perfectly feasible in these more fortunate times, when the conveyance of people from place to place has become easy and cheap, and the Local Government Board is able to take a larger and wider view than was possible only a few years ago of the dangerous classes, and of the unseemly and demoralising way in which they have become blended and confounded with the decent and honest poor.

As to the cost of such a procedure as that I am now advocating,

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* The following are some of the figures adduced in that address:—Number of local prisons in England and Wales, 114; in 54 of which there were in 1873 only 2578 prisoners (an average of about 48 prisoners); but in the remaining 60, 15,102 (an average of about 244 prisoners). Of the 54 small prisons, 8 had, in 1874, an average of 10 prisoners, and 33 of 50. The earnings of prisoners ranged from less than 4*s.* to more than 8*l.*: the average, 2*l.* 17*s.* 6*d.* The cost per head varied from 17*l.* to 122*l.* If half the prisons were disestablished 200,000*l.* a-year might be saved; and still no one of the prisons retained need be more distant from any place than fifteen miles or so. The present distribution of our county and borough prisons is very curious; Staffordshire has only one prison on its borders, but Lincolnshire has ten within its limits, of which three are in the capital city. One part of England has a prison at the service of 20,000 people, and another part of England supplies one prison to 858,000 people.

I must content myself with expressing my opinion that the expense of adapting our smaller prisons and our union workhouses to their new and better uses, would be amply defrayed by the sale of so many of these buildings as might be pronounced to be no longer necessary.

I have still a word to say on one obvious means of quickly gathering our imbeciles into asylums fitted for their reception: I mean the simple expedient of submitting every prisoner on his discharge from prison to the examination of an *expert*, who should report to a magistrate on oath (as is done in the case of pauper lunatics) the fact of a prisoner so *discharged* being imbecile or of weak mind, and a fit subject for an asylum; or, if of doubtful sanity, for an establishment in which he should pass a period of probation, thence to be sent to an asylum or discharged, as the case might require.

I conclude with a few words of explanation. The first part of this paper which deals with executions for murder is new; the remainder is not. What I have had occasion to say on the plea of insanity in criminal cases, and on the dangerous propensities of the imbecile section of our population, is simply in confirmation of what I have said and written elsewhere. Nor are my suggestions respecting a survey of our workhouses with a view to the disintegration of their ill-assorted populations, and their allotment to better uses, now made for the first time.* What is new in the suggestions now offered is the association of the county and borough gaol with the workhouse with a view to a joint survey of the two. Believing that it is fitting and convenient that those normal schools of vice, our union workhouses, should be submitted to the same examination with the prisons in which crime is punished, and that the buildings of either class should be speedily devoted to the purposes for which they are best fitted, I commend this my suggestion seriously and earnestly to all statists and statesmen.

I have given in the Appendix three tables (Tables VI, VII, and VIII) not yet noticed in the body of this paper. The first of the three displays the occupations of the murderers as extracted from the "Judicial Statistics;" the second the relation of the victim to the murderer; the third the county in which the culprits were executed. These may prove useful as tables of reference. In Tables VI and VII the facts have been thrown into groups, but without distinct headings. From Table VII we learn the large proportion in which women brought into close relationship and contact with men become the victims of their murderous assaults.

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* See my Inaugural Address as President of the Statistical Society, in the Society's *Journal*, December, 1874; and my edition of "Walker's Original," p. 223.

APPENDIX.

TABLE I.—*Executions for Murder in England and Wales during the Seventy Years from* 1805 *to* 1874 *inclusive.*

Year.	Executions for Murder.	Executions per 20 millions.	Groups of Years.					5	10
			2	4	8	16	32		
1805	10	20	30	79				97	250
'06	5	10							
'07	16	33	49						
'08	8	16							
'09	9	18	36	81	236	452	710		
'10	9	18						153	
'11	7	14	45						
'12	16	31							
'13	25	47	90	155					
'14	23	43							
'15	15	27	65					158	281
'16	21	38							
'17	25	44	67	110	216				
'18	13	23							
'19	15	26	43						
'20	10	17						123	
'21	22	37	66	106					
'22	18	29							
'23	10	16	40						
'24	15	24							
'25	10	16	32	76	153	258		95	178
'26	10	16							
'27	11	17	44						
'28	18	27							
'29	13	19	39	77					
'30	14	20						83	
'31	12	17	38						
'32	15	21							
'33	6	8	25	64	105				
'34	12	17							
'35	21	28	39					69	137
'36	8	11							
'37	8	11	17	41					
'38	5	6							
'39	10	13	24						
'40	9	11						68	
'41	9	11	22	57	101	182	366		
'42	9	11							
'43	13	16	35						
'44	16	19							
'45	12	14	21	44				61	102
'46	6	7							
'47	8	9	23						
'48	12	14							
'49	15	17	24	44	81				
'50	6	7						41	
'51	9	10	20						
'52	9	10							
'53	8	9	14	37					
'54	5	5							
'55	7	7	23					56	137
'56	16	16							
'57	13	13	24	45	114	184			
'58	11	11							
'59	9	9	21						
'60	12	12						81	
'61	14	14	29	69					
'62	15	15							
'63	22	22	40						
'64	19	18							
'65	8	8	19	39	70			48	93
'66	12	11							
'67	10	9	20						
'68	12	11							
'69	10	9	14	31					
'70	6	5						45	
'71	4	4	17						
'72	15	13							
'73	11	9	23						
'74	16	14							
Total	853	1,178							
Average	12·285	16·129							

TABLE II.—*Total Number of Persons Committed for Trial for Murder from* 1836–74 *inclusive: and the Result of the Proceedings.*

Years.	Number for Trial.			No Prosecution.	No Bill Found.	Not Guilty on Trial.	Total Acquitted.	Insane Detained.		Sentenced to Death.	Executed.
	Males.	Females.	Total.					Acquitted as Insane.	Found or Declared Insane.		
1836	—	—	73	6	12	27	45	7	1	20	17
'37	—	—	43	1	9	14	24	5	3	11	8
'38	—	—	75	2	4	35	41	7	2	25	6
'39	—	—	46	3	4	24	31	1	1	13	11
1840	—	—	54	1	4	27	32	3	1	18	9
'41	—	—	66	7	3	31	41	5	—	20	10
'42	—	—	67	2	8	37	47	3	1	16	9
'43	—	—	85	3	5	48	56	6	1	22	13
'44	—	—	75	1	9	41	51	1	2	21	16
'45	—	—	65	—	5	32	37	5	4	19	12
'46	—	—	68	—	11	36	47	6	2	13	6
'47	—	—	72	1	5[1]	37	43	5	5	19	8
'48	—	—	76	—	8	40	48	5	—	23	12
'49	—	—	84	1	7	41	49	12	4	19	15
1850	—	—	52	—	4	25	29	5	7	11	6
'51	—	—	74	—	8	44	52	5	1	16	10
'52	—	—	81	—	8	46	54	5	6	16	9
'53	—	—	79	1	8	45	54	5	3	17	8
'54	—	—	62	—	3	34	37	11	3	11	5
'55	29	28	57	1	10	28	39	4	3	11	7
'56	40	42	82	1	8	35	44	4	3	31	16
'57	42	28	70	—	2	34	36	9	5	20	13
'58	34	32	66	1	7	27	35	11	4	16	11
'59	37	33	70	—	12	32	44	5	3	18	8
1860	31	18	49	—	5	23	28	2	3	16	12
'61	37	27	64	1	5	24	30	6	2	26	14
'62	47	30	77	—	3	29	32	10	7	28	16
'63	53	30	83	—	7	34	41	7	6	29	22
'64	45	25	70	1	8	20	29	8	1	32	19
'65	37	23	60	—	8	21	29	10	1	20	8
'66	33	22	55	—	2	19	21	3	5	26	12
'67	59	35	94	6	7	47	60	5	2	27	10
'68	56	15	71	—	3	35	38	4	8	21	12
'69	36	27	63	—	10	27	37	7	1	18	10
1870	29	12	41	—	4	16	20	2	4	15	6
'71	37	17	54	—	3	23	26	10	5	13	4
'72	43	27	70	—	4	24	28	7	5	30	15
'73	32	27	59	—	5	26	31	5	5	18	11
'74	38	24	62	—	3	24	27	4	6	25	16
Total of 39 years	—	—	2,614	40	231	1,212	1,493	225	126	770	431
Average	—	—	67	1	6	31	38	6	3	20	11

TABLE III.—*Persons Committed for Trial for Murder from* 1836 *to* 1874 *inclusive, and the Results of the Proceedings: Reduced to a Ratio of Twenty Millions of Souls.*

Year.	Number for Trial.	No Prosecution.	No Bill Found.	Not Guilty on Trial.	Insane.			Sentenced.	Executed.
					Acquitted as Insane.	Found Insane.	Total.		
1836	99	8	16	36	10	1	11	29	23
'37	57	1	12	18	7	4	11	16	11
'38	98	2	5	46	10	2	12	34	8
'39	59	3	5	29	1	1	2	20	14
1840	69	1	5	35	4	1	5	23	13
'41	83	9	3	39	6	—	6	26	13
'42	83	2	10	46	4	1	5	20	11
43	104	3	6	58	7	2	9	29	16
'44	97	1	11	50	1	2	3	32	19
'45	80	—	6	38	6	5	11	25	14
'46	80	—	13	43	7	2	9	15	7
'47	84	1	6	43	6	6	12	22	9
'48	88	—	9	46	6	—	6	27	14
'49	96	1	8	47	14	5	19	21	17
1850	58	—	4	28	6	8	14	13	7
'51	82	—	9	50	6	1	7	17	10
'52	89	—	9	51	5	7	12	17	10
'53	87	1	9	50	6	3	9	19	9
'54	66	—	3	36	12	3	15	12	5
'55	61	1	11	30	4	3	7	12	7
'56	86	1	9	36	4	3	7	33	16
'57	73	—	2	36	9	5	14	21	13
'58	68	1	7	28	11	4	15	17	11
'59	71	—	13	33	5	3	8	17	9
1860	50	—	5	23	2	3	5	17	12
'61	64	1	5	24	6	2	8	26	14
'62	77	—	3	29	10	7	17	28	15
'63	80	—	7	33	7	6	13	27	22
'64	67	1	8	19	8	1	9	30	18
'65	57	—	8	20	9	1	10	19	8
'66	50	—	2	18	3	5	8	22	11
'67	87	6	7	44	5	2	7	23	9
'68	65	—	3	33	4	7	11	17	11
'69	58	—	9	18	6	1	7	23	9
1870	37	—	4	14	2	3	5	13	5
'71	47	—	3	20	8	5	13	10	4
'72	61	—	4	21	6	4	10	25	13
'73	51	—	5	22	5	4	9	14	9
'74	53	—	3	20	4	5	9	19	14
Total	2,822	44	267	1,310	242	128	370	830	469
Average	72	1	7	34	6	3	9	21	12

Table IV.—*Persons Acquitted as, and Found, Insane from* 1836 *to* 1874 *inclusive, Reduced to a Ratio of Twenty Millions of Souls.*

Year.	Acquitted as Insane.	Found or Declared Insane.	Total.	Ditto, per 20 Million.	Groups of Years.				
					2	4	8	16	13
1836	7	1	8	11					102
'37	5	3	8	11	23	30	53	143	
'38	7	2	9	12					
'39	1	1	2	2	7				
'40	3	1	4	5					
'41	5	0	5	6	11	23			
'42	3	1	4	5					
'43	6	1	7	9	12				
'44	1	2	3	3					
'45	5	4	9	11	20	38	90		
'46	6	2	8	9					
'47	5	5	10	12	18				
'48	5	0	5	6					
'49	12	4	16	19	33	52			140
'50	5	7	12	14					
'51	5	1	6	7	19				
'52	5	6	11	12					
'53	5	3	8	9	24	38	80	163	
'54	11	3	14	15					
'55	4	3	7	7	14				
'56	4	3	7	7					
'57	9	5	14	14	29	42			
'58	11	4	15	15					
'59	5	3	8	8	13				
'60	2	3	5	5					
'61	6	2	8	8	25	47	83		
'62	10	7	17	17					128
'63	7	6	13	13	22				
'64	8	1	9	9					
'65	10	1	11	10	18	36			
'66	3	5	8	8					
'67	5	2	7	7	18				
'68	4	8	12	11					
'69	7	1	8	7	12	35			
'70	2	4	6	5					
'71	10	5	15	13	23				
'72	7	5	12	10					
'73	5	5	10	9	18				
'74	4	6	10	9					
Total	225	126	351	371					
Average	6	3	9	10					

Table V.—*The Number of Persons Executed, and of Cases for Trial, in the Year of Execution of Notorious Criminals, and in the Year following: also in the Year of Non-Execution of Notorious Homicides in consequence of their being Acquitted, or subsequently Found to be Insane, and in the Year following.*

Year.	Name.	Year of Execution.	Executions following Year.	Increase or Decrease.	Cases for Trial.		Increase or Decrease.
					Year of Execution.	Year following.	
1812....	Bellingham	16	25	+9	—	—	—
'24....	Thurtell	15	10	−5	—	—	—
'28....	Corder	18	13	−5	—	—	—
'29....	Burke	13	14	+1	—	—	—
'31....	Bishop and Williams	12	15	+3	—	—	—
'37....	Greenacre	8	5	−3	43	75	+32
'39....	Courvoisier	10	9	−1	46	54	+ 8
'42....	Good	9	13	+4	67	85	+18
'49....	Rush	15	6	−9	84	52	−32
'55....	Buranelli	7	16	+9	57	82	+25
'56....	Palmer and Dove....	16	13	−3	82	70	−12
'60....	Youngman................	12	14	+2	49	64	+15
'65....	Pritchard	8	12	+4	60	55	− 5
'66....	Forward....................	12	10	−2	55	94	+39
'67....	Baker	10	12	+2	94	71	−23

Year.	Name.	Year of Reprieve.	Executions following Year.	Increase or Decrease.	Year of Reprieve.	Year following.	Increase or Decrease.
1843....	McNaughten................	13	16	+3	85	75	−10
'45	Martha Brixey (year of execution of Tawell)	12	6	−6	65	68	+ 3
'63....	Townley....................	22	19	−3	83	70	−13
'65	Geo. Broomfield and Constance Kent (year of Pritchard's execution)	8	12	+4	60	55	− 5
'72....	Rev. J. S. Watson	15	11	−4	70	59	−11

Table VI.—*Occupations of the Murderers* (*Males*).

(Extracted from the "Judicial Statistics," 1836 to 1874).

Sailors	20	
Soldiers	17	
Marines	1	
Policeman	1	
	—	39
Farmers	4	
Farm labourers	3	
Woodman	1	
Poachers	3	
	—	11
Physician	1	
Surgeon	1	
Chemist	1	
	—	3
Clerk	1	
Overlooker	1	
Retail dealer	1	
General dealers	2	
	—	5
Convicts or prisoners		6
Publicans	2	
Potman	1	
	—	3
Domestic servants	3	
Waiter	1	
	—	4
Shoemakers	2	
Tailors	6	
	—	8
Butchers		4
Bricklayers	2	
Carpenters and joiners	2	
Plasterer	1	
House painter	1	
Moulder	1	
	—	7
Weavers	2	
Factory hands	2	
Cloth finisher	1	
Currier	1	
Dyer	1	
	—	7
Bakers	2	
Sugar-baker	1	
	—	3
Labourers	29	
Dock labourer	1	
Brickmaker	1	
Lighterman	1	
	—	32
Pitman	1	
Colliers	4	
	—	5
Puddlers	3	
Ironworker	1	
Blocker	1	
Striker	1	
Blacksmiths	2	
Locksmith	1	
Saw-grinder	1	
Engine driver	1	
	—	11
No occupation		4
Occupation not stated		158
		—
Total		310

TABLE VII.—*Relationship of Victim to Murderer (Males).*

(Extracted from the "Judicial Statistics," 1836 to 1874).

Wife	56	
Paramour	24	
Sweetheart	18	
Young woman refusing addresses	3	
Prostitute	6	
Female, after rape	4	
„ fellow-servant	4	
	—	115
Father	2	
Mother	2	
Brother	2	
Sister-in-law	2	
Uncle	3	
Aunt	1	
Nephew	1	
	—	13
Child, own, legitimate	7	
„ illegitimate	6	
Child, stranger	5	
	—	18
Comrade (army, navy, and marines)	4	
Companion	3	
Neighbour	4	
Creditor	1	
	—	12
Officer, army	10	
„ navy	3	
„ marine	1	
Warder or keeper	7	
Assistant-surgeon (prison)	1	
Employer	5	
„ wife	1	
	—	28
Policeman (including three persons attempting arrest of culprit)		11
Sailor by his captain		1
Stranger, adult male	5	
„ female	1	
Stranger, aged male	3	
„ female	4	
Others	6	
	—	19
Stranger, in robbery	46	
„ burglary	9	
„ poaching	7	
„ mutiny	8	
„ quarrels	8	
„ drunkenness	2	
Protective interference	3	
In a crowd	1	
By Clerkenwell explosion	1	
	—	85
Total		302

Relationship of Victim to Murderer (Females).

Husband	13	
Father	1	
Mother	2	
Mother-in-law	1	
Brother	1	
	—	18
Infant, own, legitimate	3	
„ illegitimate	5	
Stepson	1	
Stranger, infant	1	
	—	10
Aged female		1
Mistress	1	
Landlady	1	
	—	2
Stranger (in act of robbing)		1
Total		32

Table VIII.—*Executions for Murder in the Years from* 1836 *to* 1873 *inclusive, arranged according to Counties.*

Anglesea	1	Leicester	3
Bedford	4	Lincoln	7
Berks	3	Middlesex	52
Brecon	2	Monmouth	6
Brecknock	1	Norfolk	12
Bucks	7	Northampton	2
Cambridge	4	Northumberland	6
Carnarvon	1	Nottingham	6
Chester	10	Oxford	5
Cornwall	7	Salop	8
Cumberland	4	Somerset	14
Derby	8	Stafford	26
Devon	9	Southampton	11
Dorset	5	Suffolk	9
Durham	14	Surrey	16
Essex	9	Sussex	6
Flint	1	Warwick	11
Glamorgan	6	Westmoreland	1
Gloucester	8	Wilts	7
Hereford	2	Worcester	4
Hertford	3	York	32
Kent	25		
Lancaster	51	Total	429

Note.—It must be understood that the 429 cases comprised in the table consist of such of the cases recorded within the limit of time specified, as take note of the county of the murderer, or, to be more accurate, the county in which the culprit was executed. The table comprises both males and females.

The figures of this table taken in conjunction with the population of the several counties present some interesting contrasts. The table which follows compares counties that nearly approximate in population.

Counties.	Executions for Murder.
Berks and Dorset	3 and 5
Bucks and Oxford	7 " 5
Dorset, Hertford, and Monmouth	5, 3, and 6
Essex and Somerset	9 and 14
Gloucester and Southampton	8 " 11
Kent and Stafford	25 " 26
Lancaster, Middlesex, and Yorkshire	51, 52, and 32
Lincoln and Norfolk	7 and 12
Northampton and Salop	2 " 7
Northumberland and Glamorgan	6 " 6
Suffolk and Worcester	9 " 4

MISCELLANEA.

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I.—*Principles of Vital Statistics. By* Dr. A. J. Verwey.

Introduction.

The object of this paper is to represent in an elementary form the principles of vital statistics. The final aim of "Vital Statistics" is to find and express in function of time and space the laws which regulate the quantitative and qualitative changes which populations undergo. If it is remembered that, where there are many forces at work, as in meteorological phenomena, very little is known even of purely physical conditions, we cannot but expect that this aim is very remote; for, besides the physical laws—and these on organised matter—there must needs be regarded psychical and moral laws. Of these comparatively little is known, and as to their mutual relation, our knowledge is only intuitive. Even if restrictions are made the problem will be a difficult one; and as mistakes are to be dreaded, redoubled care must be brought to bear upon it, prejudices must be left behind, and no preconceived ideas permitted. Starting from the fact, that people are born and die, the *first chapter* will both by logical addition and subtraction, and by geometrical figuring, obtain the various collections or sets of lives and deaths, as well as the relations between them. For the more complex collections of deaths, this is done by geometrical figuring only. The *second chapter*, accepting the year as the unit, states the method of giving the history of a population from different standpoints. The *third chapter* treats of the rates of mortality.

An Appendix contains some practical rules. In the first two chapters facts are directly followed up. No hypothesis is made as to continuity, when, properly speaking, there is no continuity. If a law in the ordinary analytical form must be found, or if it is all but impossible to avoid such an hypothesis (as in the question of errors caused by migrations), there cannot be a valid objection to its use. Thus, in mathematical physics nobody offers any objection to the use of this hypothetical continuity, though fully convinced of the individual existence of smallest parts of matter. Whatever knowledge may be got of their mutual relations, it is impossible to observe directly these units.

In our subject, where the first point to be achieved is to state what are the quantities that must be measured, what the relations between them, it is possible to directly follow the individual units. This consideration induced me to follow the method of the first chapter, a quite different one from that of Dr. Knapp and Dr. Zeuner, and also, though less, from that of Director K. Becker. The terminology employed in this paper has been so chosen as to suit general vital statistics, and is applicable to any group of individuals.

FIRST CHAPTER.

§ 1. Men are born and die at different times, in different places, and under different circumstances. We shall suppose a defined territory or group, and dismiss circumstances and qualities defining smaller groups within the larger one, *i.e.*, we shall make no distinction as to sex, civil position, profession, &c. There are migrations. Suppose every birth registered, as also every death and every migration, with the date of observation and the age of the observed, we should have sufficient data for finding the relations of the population to time. In speaking of the age of a person, his exact age is meant, and not a class of age between whose limits this exact age is comprised.

With our hypothesis we have only quantities of time; different elements of it, however. For the time of observation we shall use τ, for the time of birth t, and for the age θ.

The time of observation, minus the age of the observed person and minus the time of birth, is zero.

$$\tau - \theta - \mathrm{t} = 0 \quad . \ . \ . \ . \quad (A)$$

This statement is equivalent to the following:—A person observed at the time τ, aged θ, is born at $\mathrm{t} = \tau - \theta$.

A person born at t, and observed at τ, is aged $\theta = \tau - \mathrm{t}$.

A person born at t, will attain the age θ at the time $\tau = \mathrm{t} + \theta$.

The same result as by registration of births, deaths, and migrations might be obtained by geometrical figuring in a manner easily understood. The following will explain how such a diagram is obtained (see Fig. 1.):—Upon a horizontal axis take a point O, to correspond with a fixed origin of time. A unit of time is measured by a corresponding unit of length. The succeeding births are annotated thus, that the distance from B to O indicates B's birthtime. From B draw a perpendicular to the horizontal axis, and upon this measure a length equal to the duration of B's life. The case of the coincidence of two births may be indicated by a dotted line next to the full one (A'). Suppose a person immigrating at the time τ aged θ; he is born at $\mathrm{t} = \tau - \theta$. Upon the perpendicular from C, OC $=$ t, a length is measured $= \theta$, and a length CE, equal to the immigrant's duration of life. DE $=$ CE $-$ DC is the time spent by him within the group. Of course the part CD need not be drawn.

An emigration can be indicated by some sign, say a cross dot, terminating the life-line in question, at a distance from the horizontal axis equal to the age at leaving. The life-lines cut by a parallel to Oc, at a distance $= \theta'$ from it, belong to persons having lived over the age θ'. These parallels may be called age-lines.

At the time of observation τ the person born at t′ is aged $\theta' = \tau - \mathrm{t}'$, the person born at t″ is aged $\theta'' = \tau - \mathrm{t}''$. The points corresponding to these ages, taken upon the corresponding life-lines, will, as satisfying the relation $\mathrm{t} + \theta = \tau$, be situated on a straight line, cutting the horizontal axis in τ, and making a backward angle of 45° with it. We shall call such a line a numbering line; all the life-lines cut by such a numbering-line τ $(-\ \mathrm{OG} = \tau)$ belong to persons still living at the time τ.

If the annotation or registrations begin only from the time $\tau' = \mathrm{OO}'$, the numbering line T′ O′ must be drawn, and all persons then living must be treated as immigrants. It is perhaps not superfluous to mention that this method of annotation will be found to be practically impossible, even if for the life-lines another unit of length is assumed than that for the axis of births, in which case the direction of the numbering lines will be altered. In this diagram we have three kinds of lines: age-lines, life-lines, and numbering-lines. Through any point above the axis of birth such a system of lines, of course with the restriction of being within natural limits, can be drawn. Any point is determined by two of these lines, the third element being determined by the relation (A). Any point (or observation) may be represented symbolically by $t\,\theta$, $\tau\,t$, or $\theta\,t$.

A definite value of one of the elements will be indicated by accents; and by brackets, if it is expressed in function of the other elements. Thus to $t'\theta'$ belongs the time of observation $[t' + \theta']$.

§ 2. Let *equals* θ indicate persons attaining the age θ, and *coevals* τ indicate persons living at the time τ. As to the equals each of them may be further defined either by the time of his birth or by the time of observation. As to the coevals, each of them may be further defined by the time of his birth or by his age at the time of observation. A definite part of an age-line θ is defined either by two life-lines, or by two numbering-lines, or by a life-line and a numbering-line, all cases being reduced to the first by the relation (A).

A definite part of a numbering-line is defined by two life-lines, or by two age-lines, or by a life-line and a numbering-line, these cases being reduced to the first case by the relation (A).

As these lower and upper limits are to be distinguished, we shall do it in this way: an inferior limit is indicated by the cipher 1 behind and below the letter which indicates the limiting-line; an upper limit by the cipher 2 behind and below the letter which indicates the kind of limiting-line. These together with the line from which a part is cut off define thatpart. Thus in Fig. 2, AB is represented by $t_1' t_2'' \theta'$, or by $t_1' [\tau'' - \theta']_2 \theta'$, or by $[\tau' - \theta']_1 t_2'' \theta'$, or by $[\tau' - \theta']_1 [\tau'' - \theta']_2 \theta'$. Thus CD is represented by $t_1' t_2'' \tau_1'$, or by $t_1' [\tau' - \theta']_2 \tau'$, or by $[\tau' - \theta'']_1 t_2'' \tau'$, or by $[\tau' - \theta'']_1 [\tau' - \theta']_2 \tau'$.

If now this is applied to the diagram for a given population, it is seen that the symbols here given will represent the number of points where life-lines meet; in the first case with the given part of the age-line θ', in the second with the given part of the numbering-line τ'. Considering that there are succeeding periods, we take the rule, that a life-line coinciding with a line indicating the lower limit of the birth-period, must be included in the number of life-lines belonging to that period; that a life-line coinciding with an upper limit of the period of birth, must be reckoned to belong to the next following birth period.

All life-lines ending in the age-line θ will be numbered with those meeting it; this means for $\theta = 0$, that the still-born are numbered with the births.

With these rules the foregoing symbolical expressions indicate:—

Equals θ: $t_1' t_2'' \theta_2'$, the number of persons springing from the birth-period $t_1' t_2''$ attaining the age θ'.

$t_1' [\tau'' - \theta']_2 \theta'$. The number of persons, born from t' upwards, which attain the age θ' before τ''.

$[\tau' - \theta']_1 t_2'' \theta'$. The number of persons born before t'', which attain the age θ' from τ' upwards.

$[\tau' - \theta']_1 [\tau'' - \theta']_2 \theta'$. The number of persons attaining the age θ' from τ' till τ''.

All these will be identical if $\tau' - \theta' - t' = 0$ and $\tau'' - \theta' - t'' = 0$.

Coevals τ': $t_1 t_2'' \tau'$. The number of persons, sprung from $t_1' t_2''$, living at τ'.

$t_1' [\tau' - \theta']_2 \tau'$. The number of persons, born from t' upwards, which live at the time τ' aged above θ'.

$[\tau' - \theta'']_1 t_2'' \tau'$. The number of persons born before t'' living at the time τ', aged θ'' and younger.

$[\tau' - \theta'']_1 [\tau' - \theta']_2 \tau'$, the number of persons living at the time τ' in the age-class $\theta' \theta''$.

From these different numbers, collections or sets, we may proceed to the different

COLLECTIONS OF DEATHS.

A. *Primary Collections of Deaths.*

A system of lines of the three kinds will always, unless $\tau - \theta - t = 0$, give a triangle. If $\tau - \theta - t > 0$, we call it of the first kind; if $\tau - \theta - \tau < 0$, we call it of the second kind. Such a triangle we will represent symbolically by $(\tau \theta t)$.

By an extension similar to that already made, this same expression will also represent the numbers of life-lines ending in that triangle. If $\tau - \theta - t >$, τ must be an upper limit, θ and τ lower limits; if $\tau - \theta - t < 0$, τ will be a lower limit, t and θ upper limits. In the first case the general form will be represented by $(t_1 \theta_1 \tau_2)$; in the second by $(t_2 \theta_2 \tau_1)$.

First Primary Collection of Deaths. (*See Fig.* 3.)

Of those persons who, born during a given period, attain a given age, of course during a corresponding period of observation, some will die before the end of that period. These deaths form what shall be called the first primary collection of deaths.

Suppose a period of birth $t_1' t_2''$; let θ' be the given age; $t'' + \theta'$ is the upper limit of the observations, during which this attainment of the given age takes place; $t' + \theta'$ is its lower limit; the duration of the period of observation is $t'' - t'$. The lower limit of age being θ', and the upper limit being $(t'' + \theta') - t'$; the difference is again equal to $t'' - t'$.

The first primary collection of deaths consists of deaths in the unit of class of age during the unit of observation springing from the unit of generation. Now we may proceed from our definition of this collection, or from the fact that the number of life-lines ending in the triangle ABC is equal to the difference of the number of life-lines meeting AB and BC. In both cases it will be seen that the symbolical expression is $(t_1' \theta_1' \tau_2'') = (t_1' \theta_1' [t'' + \theta']_2) = t_1' t_2 \theta' - t_1' t_2'' [t'' + \theta'] = t_1' [\tau'' - \theta']_2 \theta' - t_1' [\tau'' - \theta']_2 \tau''$. . . . . (I)

Second Primary Collection of Deaths. (*See Fig.* 4.)

Persons springing from a given period of birth, if living at a given time, have different ages; not all of them will attain the age in which the person born at the beginning of the period of birth stands at the given time. Some of the first-mentioned coevals will die before attaining that particular age, forming the second primary collection of deaths.

Let the period of birth again be $t_1' t_2''$, and τ' the given time of observation, determining the collection of coevals; the distance between the limits of their ages $= (\tau' - t') - (\tau' - t'') = t'' - t'$. As the series of deaths is closed by $t'' + (\tau' - t') =$ the time when the person born at t' attains the age $(\tau' - t')$, the period of observation is also $= t'' - t'$. The second primary collection of deaths consists, as well as the first, of deaths in the unit of class of age during the unit of observation springing from the unit of generation; with this difference, that the first is the loss in passing from equals to coevals, the second that in passing from coevals to equals.

The general form for a triangle of the second kind is $(t_2\,\theta_2\,\tau_1)$, representing also the number of life-lines ending in such a triangle, and the second primary collection of deaths. Now we may proceed from our definition of that collection, or from the knowledge that the number of life-lines ending in the triangle DEF is equal to the difference of the life-lines meeting the straight lines DE and DF. In both cases the symbolical expressions will be $(t_2''\,\theta_2''\,\tau_1') = (t_2''\,[\tau' - t']_2\,\tau_1') = t_1'\,t_2''\,\tau' - t_1'\,t_2''\,\theta'' = [\tau' - \theta'']_1\,t_2''\,\tau' - [\tau' - \theta'']_1\,t_2''\,\theta'$. . . . . (II)

B. *Secondary Collections of Deaths.*

a. *First Secondary Collection of Deaths.* (*See Fig.* 3.)

Of the persons born during a given birth-period, and attaining a given age in the course of a corresponding period of observation, some will die before the end of that period; of the persons still living at the end of the said period, some will die before attaining the age at which the oldest then living stands. The persons attaining the first-mentioned age, and not the last, form the first secondary collection of deaths, viz., the collection of persons who, springing from a given birth period, die in an age-class of equal interval.

Let the period of birth be $t_1'\,t_2''$, the first-mentioned age θ', the other age will be $t'' + \theta' - t'$; the duration of the age-class $= t'' - t'$. The first death may be observed at $t' + \theta'$; the end of the observations is determined by $t'' + (t'' + \theta' - t')$, The interval $= 2\,(t'' - t')$. In our diagram for this case two verticals, t' and t'', are drawn; then an age-line, θ'; through the point of intersection of t'' and θ' the numbering-line $t'' + \theta'$ is drawn; through the point of intersection of this line with t' the age-line $t'' + \theta' - t' = \theta''$. t', t'', θ', and θ'' determine the square ABCD. The number of life-lines in this square is equal in number to the deaths in the class $\theta'\,\theta''$ springing from the generation $t'\,t''$. The symbolical expression for this is the symbolical expression of the difference of the life-lines meeting AB and CD: $(t_1'\,t''\,\theta_1'\,\theta_2'') = t_1'\,t_2''\,\theta' - t'_1\,t_2''\,\theta'$. . . . . (*a*).

Our definition heading this division will give the same result by addition of the primary collections from which we started: $(t_1'\,\theta_1'\,[t'' + \theta']_2)$ and $(t_1''\,[t'' + \theta' - t']_2\,[t'' + \theta']_1)$, and by solving these by means of (I) and (II). Therefore the theorem: The collection of deaths springing from a unit of generation, occurring in a unit of age-class is equal to the difference of the collection of equals sprung from that generation attaining the lower and that attaining the upper limit of the age-class.

b. *Second Secondary Collection of Deaths.* (*See Fig.* 4.)

Persons born in the course of a given birth-period, and living at a given time, will not all of them attain the age of the oldest living at that time, while some of those attaining that age will die before the time at which the last attains it.

The persons living at the first-mentioned time, not living at the time mentioned last, form the secondary collection of deaths, viz., the deaths occurring during a given unit of time and springing from an equal unit of generation. Let $t'\,t''$ again be the birth-period, and τ' the lower limit of the period of observation, its upper limit will be $(\tau' - t') + t''$. The limits of the age at death are $\tau' - t''$ = the last-born's age at the end of the observations, and $(\tau' + t'' - t') - t$ = the first-born's age at the end of the observations. Their difference $= 2\,(t'' - t')$. In our diagram for this case two verticals t' and t'' are drawn; then a numbering-line τ'; through the point of intersection of τ' and t', the age-line $\tau' - t'$; through the latter's point of intersection with t'' the numbering-line $\tau'' = \tau' + t'' - t'$. The straight lines t', t'', τ' and τ'', define a parallelogram; the life-lines ending within it are equal in number to the second secondary collection of deaths. This number is found by deducting from the points, which the life-lines drawn from $t'\ t''$ have in common with τ', those they have in common with τ''. The symbolical expression for this is $(t_1' t_2''\ \tau_1' \tau_2'') = t_1'\ t_2''\ \tau' - t_1'\ t_2''\ t''$ (*b*). The same expression is arrived at, if the two primary collections entering into the definition heading this division, viz., $(t_2''\ [\tau' - t']_2\ \tau')$ and $(t_1'\ [t' - t'],\ [\tau' + t'' - t'])$ are reduced to collections of lives by means of the formulæ (I) and (II).

We have, therefore, the theorem:

The collection of deaths during unit of observation springing from unit of generation, is equal to the collection of coevals at the beginning of the observations, less those at the end of the observations, both springing from the given unit of generation.

c. *Third Secondary Collection of Deaths.* (*See Fig.* 5.)

The preceding secondary collections of deaths were combinations of primary collections of both kinds. The first was a combination of a first and a second primary collection, so determined that they had equal birth-periods and equal age-classes, while the upper limit of the period of observation in one, was the same as the lower limit of the period of observation in the other. The second was a combination of a second and a first primary collection so determined, that they had equal birth-periods and periods of observation, while the upper limit of the age-class in the first-named was the same as the lower limit of the age-class in the other. We shall now combine two primary collections of deaths, having the same age-class and period of observation, and each a birth-period so defined that its end t in one is the beginning of the other's birth-period. Let the given elements be θ', θ'', τ', τ'' and t; the deaths occurring during the period $\tau_1'\ \tau_2''$ in the age-class $\theta_1'\ \theta_2''$ (both before and after t) form the third secondary collection.

It is evident that there can be no other deaths than those springing from the generation $\tau' - \theta''$ till t, and those springing from the generation $t_1\ [\tau'' - \theta']_2$, therefore no other than from a generation: $\tau'' - \tau' + \theta'' - \theta' =$ twice the chosen unit.

In our diagram for this case from t a perpendicular is drawn, then the age-lines θ' and θ'' (or two numbering-lines τ' and τ''), afterwards through the points of insersection of t with θ' and θ'' (or of t with τ' and τ'') the numbering-lines $t + \theta'$ and $t + \theta''$ (or the age-lines $\tau' - t$ and $\tau'' - t$). θ', θ'', $t + \theta''$, and $t + \theta'$ (or τ', τ'', τ', $- t$, and $t'' - t$) define a parallelogram; the life-lines terminated in this parallelogram represent the deaths in the age-class $= \theta_1'\ \theta_2''$ during the period of observation $t + \theta'$ till $t + \theta''$. This number is found by deducting from the number of life-lines having a point in common with the part cut from τ' by θ' and θ'', and those having a point in common with the part cut from θ' by τ' and τ'', the number of life-lines having a point in common with the part cut from θ'' by τ' and τ'', and those having a point in common with the part cut from τ'' by θ' and θ''.

For this the symbolical expression will be:—

$(\tau_1'\ \tau_2''\ \theta_1'\ \theta_2'') = [\tau' - \theta'']_1\ [\tau' - \theta']_2\ \tau' + [\tau' - \theta']\ [\tau'' - \theta']\ \theta' - [\tau' - \theta']_1\ [\tau'' - \theta'']_2\ \theta'' - [\tau'' - \theta'']_1\ [\tau'' - \theta']_2\ \tau''$ ..... (*c*)

The same expression is arrived at if the two primary collections from which we started, namely $(t_2\,\theta_2''\,\tau_1')$ and $(t_1\,\theta_1'\,\tau_2'')$, are reduced to collections of lives by (I) and (II). It expresses the theorem :—

The collection of deaths occurring in the unit of age-class during a unit of observation, is found by adding to the collection of coevals in the given age-class at the beginning of the observations, the collection of equals attaining the lower limit of the age-class in the course of the period of observation, and by deducting from this sum the sum of the collection of equals attaining the upper limit of the age-class in the course of the period of observation, and that of the coevals in the given class of age at the end of the period of observation.

Suppose known the coevals τ, and their distribution as to the preceding units of generation, further the numbers of births occurring in each unit after τ, all primary collections of deaths ascending by the accepted units, for τ, θ and τ; then all following collections of equals and coevals can be found also ascending by units.

Inversely we can, if similar quantities are known before τ, find all former collections of coevals and equals based on the same units.

C. *Further Collections of Deaths.*

Without fully explaining how other collections may be formed by joining together different primary collections, we shall refer to the engravings 6, 7, 8, 9, and 10, merely giving some explanations.

a. From 6 and 7 it is evident how, by adding to a primary triangle (in 6 of the first, in 7 of the second kind, represented in both as shaded) one of the other kind of triangle having the same unit of time, but only one limiting element (side of the triangle) in common; every time a secondary collection is found, viz., that of which the limits are those defining the composing primary collection, except the limit they have in common.

b. In figs. 8, 9, and 10, the secondary collection of deaths are shaded. To each of these there have been added primary collections; thus every time they have but one limit (lower or upper) in common with a limit (here an upper or a lower one) of the given secondary collection. The resulting collections might be called tertiary collections. If brackets and accents are omitted, there will be found the following symbolical expressions :—

From 8. $t_1\,t_2\,\theta_1\,\tau_2$; $t_1\,\tau_2\,\theta_1\,\theta_2$; $t_1\,t_2\,\tau_1'\,\theta_2$; $\tau_1\,t_2\,\theta_1\,\theta_2$.
„ 9. $t_1\,t_2\,\theta_1\,\tau_2$; $t_1\,\theta_1\,\tau_1\,\tau_2$; $t_1\,t_2$; $\tau_1\,\theta_2$; $\theta_2\,t_2\,\tau_1\,\tau_2$.
„ 10. $\theta_1\,\theta_2\,\tau_1\,t_2$; $\theta_1\,\theta_2\,t_1\,\tau_2$; $t_1\,\theta_1\,\tau_1\,\tau_2$; $\theta_2\,t_2\,\tau_1\,\tau_2$.

Only six different expressions.

Choosing one at random, and affixing brackets and accents, *e.g.* $(t_1'\,t_2''\,\tau_1'\,\theta_2'')$ we say this means the collections of persons springing from $t_1'\ t_2''$, dying younger than θ'' from the time τ' upwards. Either from the diagram, or from the solution of the three composing primary collections, it will be found to be equal to $t_1'\,t_2'\,\tau' - t_1'\,t_2''\,\theta''$.

So $(t_1'\,\tau_1'\,\theta_1'\,\tau_2'') = t_1'\,[\tau' - \theta']_2\,\tau' + [\tau' - \theta']_1\,[\tau'' - \theta']_2\theta' - t_1'\,[\tau'' - \theta']_2\,\tau''$.

The rest of the combinations by fours of the six limits will not permit to determine the other limits from the given limits; of course of natural limits this statement does not take heed.

It will not be very difficult to find the collections corresponding to the combinations by fives of the six limits, $\mathrm{t}_1, \mathrm{t}_2, \tau_1\, \tau_2, \theta_1$, and θ_2; nor to see how the combination of all limits may be formed from primary collections, or from complex collections; *e.g.*, from two tertiary or from three secondary, or from two secondary and two primary collections.

§ 3. Inversely we shall now start from the hexagon, formed by the six intersecting lines $\mathrm{t}', \mathrm{t}'', \tau', \tau'', \theta'$, and θ'', and by restriction of the limits make the transitions to pentagonal, quadrangular, and triangular collections. Dismissing the hypothesis of equal unities, also making no distinction which is greatest, $\mathrm{t}_1'\, \mathrm{t}_2''$ or $\theta_1\, \theta''$, we obtain a hexagon (ABCDEF, fig. 11) if τ' and τ'' satisfy the conditions: $\theta'' > [\tau' - \mathrm{t}'] > \theta'$; $\theta'' > [\tau'' - \mathrm{t}''] > \theta'$; $\mathrm{t}'' > [\tau' - \theta'] > \mathrm{t}'$; $\mathrm{t}'' > [\tau'' - \theta''] > \mathrm{t}'$. The angles of the hexagon ABCDEF are defined as follows:—A, by t' and $[\tau' - \mathrm{t}']$; B, by t' and θ''; C, by $[\tau'' - \theta'']$ and θ''; D, by t'' and $[\tau'' - \mathrm{t}'']$; E, by t'' and θ'; F, by $[\tau' - \theta']$ and θ'.

The remaining points of intersection of the three pairs of parallels are:—G, $[\tau' - \theta'']$ and θ''; J, t' and θ'; K, $[\tau'' - \theta']$ and θ'; H, t'' and θ''; L, t'' and $[\tau' - \mathrm{t}'']$; I, t' and $[\tau'' - \mathrm{t}']$.

The number of life-lines ending within this hexagon is equal to the number of persons who springing from $\mathrm{t}'\mathrm{t}''$, have died in the course of the period of observation $\tau'\tau''$ in the age-class $\theta'\theta''$. This number is found by deducting from the number of points, which any life-lines have in common with AF and FE, the number of points which any life-lines have in common with BC and CD.

The symbolical expression for this will be:—$(\mathrm{t}_1'\, \mathrm{t}_2'', \theta_1'\, \theta_2'', \tau_1'\, \tau_2'') = \mathrm{t}_1'$

$$[\tau' - \underset{\substack{=\\ \mathrm{P}}}{\theta'}]_2\, \tau' + [\tau' - \underset{\substack{=\\ \mathrm{Q}}}{\theta'}]_1\, \mathrm{t}_2''\, \theta' - \mathrm{t}_1'\, [\tau'' - \underset{\substack{=\\ \mathrm{R}}}{\theta''}]_2\, \theta'' - [\tau'' - \underset{\substack{=\\ \mathrm{S}}}{\theta''}]_1\, \mathrm{t}_2''\, \tau''. \qquad (d).$$

Saying: The collection is equal in number to the number of coevals τ', aged above θ' and born from t', increased by the collection of equals θ' born before t'' and attaining the given age from τ' upwards, diminished by the collections, firstly, of equals θ'', born from t' and attaining the age θ'' before τ''; secondly, of coevals τ'', aged θ'' and younger, and born before t''. Different suppositions as to the value of the elements will give for P, Q, R, and S, different values. Suppose:—

(*a.*) $\tau' = \mathrm{t}' + \theta'$; then $\mathrm{P} = 0$, and $\mathrm{Q} = \mathrm{t}_1'\, \mathrm{t}_2''\, \theta'$.
(*b.*) $\tau'' = \mathrm{t}'' + \theta''$; then $\mathrm{R} = \mathrm{t}_1'\, \mathrm{t}_2''\, \theta''$, and $\mathrm{S} = 0$.
(*c.*) $\theta'' = \tau'' - \mathrm{t}'$; then $\mathrm{R} = 0$, and $\mathrm{S} = \mathrm{t}_1'\, \mathrm{t}_2''\, \tau''$.
(*d.*) $\theta' = \tau' - \mathrm{t}''$; then $\mathrm{P} = \mathrm{t}_1'\, \mathrm{t}_2''\, \tau'$, and $\mathrm{Q} = 0$.
(*e.*) $\mathrm{t}' = \tau' - \theta''$; then $\mathrm{P} = [\tau' - \theta''], [\tau'\, \theta']_2\, \tau'$, and
$\mathrm{R} = [\tau' - \theta'']_1\, [\tau'' - \theta'']_2\, \theta''$.
(*f.*) $\mathrm{t}'' = \tau'' - \theta'$; then $\mathrm{Q} = [\tau' - \theta']_1\, [\tau'' - \theta']_2\, \theta'$, and
$\mathrm{S} = [\tau'' - \theta'']_1\, [\tau'' - \theta']_2\, \tau''$.

These six cases correspond each to the falling away of one of the limits, giving every time a pentagon; these are respectively J B C D E, etc. The corresponding symbolical expressions are found by introducing the conditional value into the expression (*d*). The pronunciation of the expressions so found will bring no difficulties. If we choose a condition at random, say (*a*) corresponding to τ, not being given, and introduce it into (*d*), it will transform it into: $(\mathrm{t}_1'\, \mathrm{t}_2''\, \theta_1'\, \theta_2''\, \tau_2'') = \mathrm{t}_1'\, \mathrm{t}_2''\, \theta' - \mathrm{t}_1'\, [\tau'' - \theta'']_2\, \theta'' - [\tau'' - \theta'']_1\, \mathrm{t}_2''\, \tau''$.

The collection of persons springing from $\mathrm{t}'\, \mathrm{t}''$ who die before τ'' in the age-class $\theta'\, \theta''$, is equal to the collection of equals θ' springing from $\mathrm{t}'\, \mathrm{t}''$, less the collections firstly of equals θ'' born from t' upwards and attaining the age θ'' before τ'', secondly of coevals τ'' aged θ'' and younger, and born before t''.

By combining the conditious (*a*) and (*b*), we express that there are only natural limits for the observations, or rather only those dependent of the values of the given elements. By introducing these conditional values into (*d*) the following expression is obtained $(t_1' \, t_2'' \, \theta_1' \, \theta_2'') = t_1 \, t_2'' \, \theta' - t_1' \, t_2'' \, \theta''$.

It is represented in our diagram by J B H E, and coincides with the first secondary collection of deaths, if $t'' - t' = \theta'' - \theta'$.

The combination of (*c*) and (*d*) will give: $(t_1' \, t_2'' \, \tau_1' \, \tau_2'') = t_1' \, t_2'' \, \tau_1' - t_1' \, t_2'' \, \tau''$, represented in our diagram by A L I D, and coinciding with the second secondary collection if $t'' - t' = \tau'' - \tau'$.

(*d*) and (*e*) combined will on substitution in (*d*) transform it to :—

$$(\theta_1' \; \theta_2'' \; \tau_1 \; \tau_2'') = [\tau' - \theta'']_1 \, [\tau' - \theta']_2 \, \tau' + [\tau' - \theta']_1 \, [\tau'' - \theta']_2 \, \theta' - [\tau' - \theta'']_1 \, [\tau'' - \theta'']_2 \, \theta'' - [\tau'' - \theta'']_1 \, [\tau'' - \theta']_2 \, \tau''.$$

It is represented in our diagram by the parallelogram G F K C, and coincides with the third secondary collection if $\theta'' - \theta'' = \tau'' - \tau'$ or $\tau'' - \theta'' = \tau' - \theta' = t$.

If two conditions respectively coinciding with the falling away of limits of different elements are supposed together, the introduction of the conditional values into (*d*) will transform it into quadrangular collections, except those combinatious which bring to $t'' = t'$; $\theta'' = \theta'$; and $\tau'' = \tau'$, being (*a*) and (*d*), (*b*) and (*c*), (*a*) and (*e*), (*b*) and (*f*), (*c*) and (*e*), (*d*) and (*f*).

(*a*) and (*c*) give the quadrangle J D E I, and the formula :

$$(t_1' \, t_2'' \, \theta_1' \, \tau_2'') = t_1' \, t_2'' \, \theta' - t_1' \, t_2'' \, \tau'.$$

(*b*) and (*d*) give the quadrangle A L B H, and the formula :

$$(t_1' \, t_2'' \, \tau_1' \, \theta_2'') = t_1' \, t_2'' \, \tau' - t_1' \, t_2'' \, \theta''.$$

(*b*) and (*e*) give the quadrangle G H E F, and the formula.:

$$(\theta_1' \; \theta_2'' \, \tau_1' \; t_2'') = [\tau' - \theta'']_1 \, [\tau' - \theta']_2 \, \tau' + [\tau' - \theta']_1 \, t_2'' \theta' - [\tau' - \theta'']_1 \, t_2'' \, \theta''.$$

(*c*) and (*f*) give the quadrangle A F K I, and the formula :

$$(\tau_1' \, \tau_2'' \, t_1' \, \theta_1') = t_1' \, [\tau' - \theta']_2 \, \tau_1 + [\tau' - \theta']_1 \, [\tau'' - \theta']_2 \, \theta' - t_1' \, [\tau'' - \theta']_2 \, \tau''.$$

(*a*) and (*f*) give the quadrangle J B C K, and the formula :

$$(\theta_1' \, \theta_2'' \, t_1' \, \tau_2'') = t_1' \, [\tau'' - \theta']_2 \, \theta' - t_1' \, [\tau'' - \theta''_2] \, \theta'' - [\tau'' - \theta'']_1 \, [\tau'' - \theta']_2 \, \tau''.$$

(*d*) and (*e*) give the quadrangle G L D C, and the formula :

$$(\tau_1' \, \tau_2'' \, t_2'' \, \theta_2'') = [\tau' - \theta'']_1 \, t_2'' \, \tau' - [t' - \theta'']_1 \, [\tau'' - \theta'']_2 \, \theta'' - [\tau'' - \theta'']_1 \, t_2'' \, \tau''.$$

The combinations by threes of the conditions for so far as they do not conduct to collections zero or impossible, are two in number. The first, a combination of (*a*), (*c*), and (*f*) gives the triangle J I K, and the formula :

$$(t_1' \, \theta_1' \, \tau_2'') = t_1' \, [\tau'' - \theta']_2 \, \theta' - t_1' \, [\tau'' - \theta']_2 \, \tau'',$$

fully coinciding with the first primary collection.

The second, being a combination of (*b*), (*d*), and (*e*), gives the triangle G L H, and the formula : $(t_2'' \, \theta_2'' \, \tau_1') = [\tau' - \theta'']_1 \, t_2'' \, \tau' - [\tau' - \theta'']_1 \, t_2'' \, \theta''$, fully coinciding with the second primary collection of deaths.

SECOND CHAPTER.

Collections of Lives and Deaths with the Year as Unit of Time.

§ 1. The first chapter having been devoted to the general discussion of the relations between collections of lives and of deaths, in this chapter the year shall be assumed as unit of time. For the periods of birth and observation the year will be understood to extend from noon of 31st December of any year τ, till noon of December 31st of the year $\tau + 1$; the age-classes will ascend by steps of one year from o till ω = the highest whole-number age attained. It is to be remarked that leap years are here considered as making no difference, whatever may be their influence in the determination of proportional numbers, and in the seeking of a law of mortality. Their influence may be partly eliminated by combining the observations of multiples of four years. In relation with this, it would be advantageous to make the interval between two census say of twelve years; ten years will, however, do very well, if the insecurity of the whole thing is considered.

Of course the general relations and definitions will hold good here; as much as possible, however, this chapter shall be kept independent of the first.

The whole of the persons born in the course of a year t, will be called the generation t.* At the end of the year t, the person born at the beginning of it is about to attain the age 1, at the end of $t + 1$, about to attain the age 2; at the end of $t + \theta$, about to attain the age $\theta + 1$. A person born at the end of t attains the age 1 at the end of $t + 1$, the age 2 at the end of $t + 2$, the age θ at the end of $t + \theta$. From this it follows that the generation t attains the age θ in the course of $t + \theta$. The persons born in a year are to be considered as attaining the age 0 during the year t.

Persons still living at the end of the year t, belonging to that generation t, are aged from 0 till 1 year, they are said to stand in the class 0; those belonging to the generation t, and still living at the end of $t + \theta$, stand in the class θ.

Persons living at the end of τ in the class 0, are born in the year τ; those then standing in the class θ are born in the year $\tau - \theta$.

Persons living at the end of τ, being born in that year, stand in the class 0, those born in the year $\tau - \theta$ stand in the class θ.

Persons attaining the age 1 in the course of τ, are born in $\tau - 1$; those attaining the age θ in the course of τ, are born in $\tau - \theta$.

The whole of the living on 31st December τ, will be represented by A^τ (A = adsunt); the date being indicated by the cypher behind and above A.

The persons living on 31st December τ, in the class θ, are represented by ${}_\theta A^\tau$, the class being represented by its cypher before and below A. The persons living on 31st December τ, who were born in t, are represented by A^τ_t, the birth-year being indicated by a cypher behind and below A^τ.

${}_\theta A^\tau = A^\tau_t$, if the relation between the indices is $\tau - \theta - t = 0$.

The distribution of A according to age-classes of one year, and that to yearly generations, give the same results.

Persons attaining a given age θ are represented by ${}_\theta V$ (V = vivunt), the age attained being indicated by its cypher before and below V. Persons attaining the age θ, and springing from the birth-year t, are represented by ${}_\theta V_t$. Persons attaining the age θ in the course of the year τ, are represented by ${}_\theta V^\tau$.

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* I shall hold myself free to make the reasoning general; special cases will be found very easily by assuming special values for τ, θ and t, within their natural limits.

The collections A^τ may be found directly by numbering them, either by a census or from registers. If the census has been taken on some other day than the 31st of December, from it, by help of other observations to be discussed more fully, the population at the end of that year may be found.

In a region or group of some extent, it will be found impracticable directly to determine the quantities ${}_\theta V$; indirect methods will be explained in the following pages.

Populations undergo changes, changes as to quantity and quality. The population increases, receives new matter by births and by immigrations; it decreases, loses by deaths and emigrations. The births of the year t may be represented either by N_t or by ${}_0V_t$; they are found by direct observation by registration.

A collection of deaths is represented by M (M = mortui); immigrations will be represented by I, emigrations by E.

The year of observation is indicated by a cypher behind and above the letter indicating the kind of observation; the year of birth by a cypher behind and below that letter; the age-class to which the observed belongs by a cypher below and before that letter. M^τ, E^τ, and I^τ, are the deaths, emigrations, and immigrations during the year τ:

(*a.*) M^τ_t, E^τ_t, I^τ_t, are deaths, emigrations, and immigrations in the course of τ of persons born in t.

(*b.*) ${}_\theta M^\tau$, ${}_\theta E_\tau$, and ${}_\theta I^\tau$, are deaths, emigrations, and immigrations during the year τ of persons standing in the age-class θ.

(*c.*) ${}_\theta M_t$, ${}_\theta E_t$, ${}_\theta I_t$, represent the deaths, emigrations, and immigrations in the class θ of persons belonging to the generation t.

Each of these collections may be found from appropriate registers.

The collections (*a*) belong to two age-classes each of one year. This is evident, as a person born at the beginning of t, if observed at the beginning of τ, will just be aged $\tau - t$, and if observed at the end of τ, is about to attain the age $\tau - t + 1$; and as a person born at the end of the year t, being observed at the end of the year τ, just attains the age $\tau - t$, while being observed at the beginning of τ, he has just attained the age $\tau - t - 1$. The age-classes will, therefore, be $\tau - t - 1$, and $\tau - t$. If the deaths in the course of τ of persons belonging to the generation t in the class $\tau - t - 1$, are indicated by ${}_{\tau-t-1}M^\tau_t$, and the deaths in the class $\tau - t$ are indicated by ${}_{\tau-t}M^\tau$, we have:

$$M^\tau_t = {}_{\tau-t-1}M^\tau_t + {}_{\tau-t}M^\tau_t \ldots \quad (a.)$$

Similar expressions for emigrations and immigrations by substituting E and I for M.

(*b.*) Deaths occurring during the year τ in the class θ belong to two generations. In the course of τ persons will die in the class θ; at the end of $\tau - 1$, they stood either in the class $\theta - 1$, these being born in $\tau - \theta - 1$, or in the class θ, these being born in $\tau - \theta$. A person observed at the exact age θ, and at the beginning of τ, is born at the beginning of $\tau - \theta$; a person observed at the exact age θ, and at the end of τ, is born at the end of $\tau - \theta$; a person observed at the exact age $\theta + 1$, and at the beginning of τ, is born at the beginning of $\tau - \theta - t$; a person observed at the exact age θ and at the end of τ, is born at the end of $\tau - \theta - 1$. Therefore, $\tau - \theta - 1$ and $\tau - \theta$ are these generations; employing the same notation as above, the expression is obtained for M: ${}^{\theta}M^{\tau} = {}_{\theta}M^{\tau}_{\tau-\theta-1} + {}^{\theta}M^{\tau}_{\tau-\theta}$. . . . (*b.*)

Also similar ones for E and I.

(*c.*) The deaths from the generation t in the age-class θ, occur in two years of observation. This is evident, as a person born at the beginning of t attains the age θ in the beginning of $t + \theta$, and attains the age $\theta + 1$ at the beginning of $t + \theta + 1$; while a person born at the end of t attains the age θ at the end of $t + \theta$, and the age $\theta + 1$ at the end of $t + \theta + 1$. The years of observation, therefore, are $t + \theta$ and $t + \theta + 1$. If the same notation is employed as above, we obtain : ${}_{\theta}M_{t} = {}_{\theta}M_{t}^{t+\theta} + {}_{\theta}M_{t}^{t+\theta+1}$ (*c*). And similar formulæ for I and E.

If in (*a*), (*b*), and (*c*), $t = \tau - \theta$ is substituted, these expressions become:—

$$(a.)\ M^{\tau}_{\tau-\theta} = {}_{\theta-1}M^{\tau}_{\tau-\theta} + {}_{\theta}M^{\tau}_{\tau-\theta}.$$

$$(b.)\ {}_{\theta}M^{\tau} = {}_{\theta}M^{\tau}_{\tau-\theta-1} + {}_{\theta}M^{\tau}_{\tau-\theta}.$$

$$(c.)\ {}_{\theta}M_{\tau-\theta} = {}_{\theta}M^{\tau+1}_{\tau-\theta} + {}_{\theta}M^{\tau}_{\tau-\theta}.$$

They have in common ${}_{\theta}M^{\tau}_{\tau-\theta}$; the other primary collection forming with this the secondary collections in question, is found to have in (*a*) an age-class one year lower, in (*b*) a generation one year younger, and in (*c*), a following year of observation.

These primary collections may be formed with little more trouble than the collections formed till very recently. In the following paragraphs these collections will be supposed to be formed every year, viz., the collections of deaths, emigrations, and immigrations in either of the two age-classes belonging to each generation. (See Appendix.)

§ 2. Let the starting point be a census on 31st December τ, and let the then living A^{τ} be distinguished with regard to the generation they belong to (or with regard to the class to which they belong). As it will not give much additional labour, both are indicated. If ω is the highest age, we have :

$$A^{\tau} = {}_{0}A^{\tau}_{\tau} + {}_{1}A^{\tau}_{\tau-1} + \text{etc.} + {}_{\theta}A^{\tau}_{\tau-\theta} + \text{etc.} + {}_{\omega}A^{\tau}_{\tau-\omega}.$$

31st December of $\tau + 1$ will give:

$$A^{\tau+1} = {}_{0}A^{\tau+1}_{\tau+1} + {}_{1}A^{\tau+1}_{\tau} + \text{etc.} + {}_{\theta}A^{\tau+1}_{\tau-\theta+1} + {}_{\theta+1}A^{\tau+1}_{\tau-\theta} + \text{etc.} + {}_{\omega}A^{\tau+1}_{\tau-\omega+1}.$$

The direct determination of the latter expression may be avoided, as it can be done by employing the data of the former, and the primary collections of the year $\tau + 1$. Thus a rigorously true analysis of the population at 31st December $\tau + 1$ will be obtained without the labour and costs of a new census. ${}_{0}A^{\tau+1}_{\tau+1}$ are born in $\tau + 1$; they proceed not only from $N_{\tau+1}$, but amongst them there will be some who born elsewhere in $\tau + 1$ have immigrated into the groups, of course belonging to the class 0; these are represented by ${}_{0}I^{\tau+1}_{\tau+1}$.

Some of the $N_{\tau+1}$ will have emigrated in the course of $\tau + 1$; these are ${}_{0}E^{\tau+1}_{\tau+1}$.

Within the group there will have died (having belonged to $N_{\tau+1}$ and to

${}_0I^{\tau+1}_{\tau+1}$) a number ${}_0M^{\tau+1}_{\tau+1}$. We find if the homologous collections are placed within brackets, with the signs of each without the brackets:

$${}_0A^{\tau+1}_{\tau+1} = N_{\tau+1} - {}_0(M + E - I)^{\tau+1}_{\tau+1}.$$

The method of treating the other terms will be shown in the general term.

${}_\theta A^\tau_{\tau-\theta}$ would, if there had been no deaths and emigrations, have belonged to the living on 31st December $\tau+1$, in the class $\theta+1$. There have been immigrations of persons having belonged to a collection ${}_\theta A_{\tau-\theta}$ in another group to the number of $I^{\tau+1}_{\theta-\tau}$; found by adding its composing primary collections $\left\{\text{by form } (a).\right\}$

Of these immigrants and of $A^\tau_{\tau-0}$, there are a certain number of deaths and emigrations during $\tau + 1$; $M^{\tau+1}_{\tau-\theta}$ and $E^{\tau+1}_{\tau-\theta}$, also found from their composing primary collections by (a).

We find, therefore, ${}_{\theta+1}A^{\tau+1}_{\tau-\theta} = {}_\theta A^\tau_{\tau-\theta} - (M + E - I)^{\tau+1}_{\tau-\theta}$.

From the different terms composing $A^{\tau+1}$, and from the primary collections formed in $\tau + 2$, and the births during that year, the terms composing $A^{\tau+2}$ will be found.

If reasons of a practical nature prevent the census being taken on the 31st of December τ, there will still be no serious difficulty; for suppose the census to have been taken on November 25th τ, the deaths, emigrations, and immigrations springing from the generations τ_1 $\tau-1$, $\tau-2$, etc., till $\tau-\omega$, occurring from 25th November till 21st December will be collected, with the births during that period; then the relation will hold good:—

$${}_\theta A^\tau_{\tau-\theta} = A^{\text{on 25th Nov.}}_{\tau-\theta} - (M - E - I)^{\text{from 25th Nov. till 31st Dec. }\tau}_{\tau-\theta}$$

For $\theta = 0$, a term must be added

$$N_{\text{from 25th Nov. till 31st Dec.}}$$

§ 3. The next question will be to determine how a given set of persons born attain the different steps of age. A direct determination will be found to be impossible. The primary collections above mentioned will facilitate an indirect determination. It should by no means be forgotten that the expression, "a given set of persons," must be discarded where there are migrations. Then the problem to be solved should be expressed thus:—"To find how, in a given group, the different limits of age are attained." In the terminology employed in the first chapter, it is the determination of equals. As this must give the numerical data for establishing a law of mortality, the nearer to each other we take the values of the independent variables presented by the problem, and for which the dependent variables (the quantities of equals) are measured, the better it will be.

It is chiefly practical considerations that must decide. This is certain, that our assumed unit of a year if well applied will already permit us to give tolerably correct values. For the first years, where death-rates are high and quickly varying, a period of a month or of a quarter of a year might be assumed, as unit of generation, age-class, and observation.

Let the starting-point again be the result of a census, if necessary reduced to 31st December. $A^\tau = A^\tau_\tau + {}_1A^\tau_{\tau-1} +$ etc. $+ {}_\theta A^\tau_{\tau-\theta} +$ etc. A^τ_τ will attain the age 1 within the group in so far as they do not die or emigrate before their attaining that age.

Besides these, there will be persons having belonged to ${}_{0}A_{\tau}^{\tau}$ in anothers group, who after immigration in the class 0 will attain the age 1, in so far a they do not die or emigrate again before that event. If now the collections ${}_{0}I_{\tau}^{\tau+1}$, ${}_{0}M_{\tau}^{\tau+1}$ and ${}_{0}E_{\tau}^{\tau+1}$ have been formed, the following will hold good:—

$$ {}_{1}V_{\tau} = {}_{0}A_{\tau}^{\tau} - {}_{0}(M + E - I)_{\tau}^{\tau+1}. $$

Next investigating the general term, ${}_{\theta+1}V_{\tau-\theta}$, we shortly remark:

Persons living in the class θ on 31st December τ, will attain the age $\theta+1$ within the group in $\tau+1$, in so far as they do not die or emigrate before attaining that age.

Moreover, the age $\theta+1$ will be attained within the group by persons who have made a part of a collection ${}_{\theta}A_{\tau-\theta}^{\tau}$ in another group, and have joined the group in question before their attaining the age $\theta+1$, at least in so far as they do not die or emigrate again before that event. Of those persons who might have attained the age $\theta+1$ within the group, some will die before that event ${}_{\theta}M_{\tau-\theta}^{\tau+1}$, while others will emigrate, ${}_{\theta}E_{\tau-\theta}^{\tau+1}$

The foregoing is expressed by the form:—

$$ {}_{\theta+1}V_{\tau-\theta} = {}_{\theta}A_{\tau-\theta}^{\tau} - {}_{\theta}(M + E - I)_{\tau-\theta}^{\tau+1}. $$

The year $\tau+1$ gives the series:—

$$ {}_{0}V_{\tau+1} \qquad {}_{1}V_{\tau} \quad {}_{2}V_{\tau-1} \text{ etc. } \quad {}_{\theta+1}V_{\tau-\theta} \text{ etc.} $$

The following years give:—

$$ \begin{array}{lllll} {}_{Q}V_{\tau+2} & {}_{1}V_{\tau+1} & {}_{2}V_{\tau} & {}_{3}V_{\tau-1} & {}_{\theta+2}V_{\tau+\theta} \text{ etc.} \\ {}_{0}V_{\tau+\theta} \text{ etc.} \quad {}_{\theta-2}V_{\tau+2} & {}_{\theta-1}V_{\tau+1} & {}_{\theta}V_{\tau} & {}_{\tau-1}V_{\tau-1} \text{ etc.} & \end{array} $$

In each horizontal column the sum of right hand and left hand indices in each term is equal to the year of observation. Each vertical column gives the history within the group of the generation indicated by the right hand index with regard to the quantities attaining the different ages.

As well as by this method the same result can be obtained by a more direct method, if once one series has been calculated; and if the births of the following years are considered. Let such a fundamental series be written in an inverse order, it will be:—

$$ {}_{\omega}V_{\tau-\omega+1} \text{ etc. } {}_{\theta+1}V_{\tau-\theta}, \; {}_{\theta}V_{\tau-\theta+1}, \text{ etc. } {}_{1}V_{\tau}, \; {}_{0}V_{\tau+1}. $$

As the highest age is ω, ${}_{\omega+1}V_{\tau-\omega+1}$ is zero.

To each of the other collections there must be added the collection of persons springing from the generation indicated, who have immigrated in the age-class indicated by the left-hand index, and from this sum must be subtracted the sum of the collections of deaths and emigrations satisfying the same conditions. Thus from ${}_{\theta}V_{\tau-\theta+1}$, and the collections belonging to it, we find:—

$$ {}_{\theta+1}V_{\tau-\theta+1} = {}_{\theta}V_{\tau-\theta+1} - {}_{\theta}(M + E - I)_{\tau+\theta+1} $$

The three homologous terms will be calculated from their primary collections by (c). If we add to the collections of equals thus obtained ${}_{0}V_{\tau+2}$, a new series is obtained, from which we may proceed in the same manner.

THIRD CHAPTER.

§ 1. The collections of lives and deaths treated of in the foregoing chapter form the elements of the population's history. However, they are not sufficient; something more must be done; the results of the observations must be given in a form facilitating comparison. With this view, rates must be calculated, and to these calculations this chapter is devoted. Each of the collections of deaths gives occasion for the determining of proportional numbers. Their use will be to give an insight to common sense into the varying conditions of different groups, to facilitate their comparison, to be the first step in searching for the connection between the variations and their causes, to form the groundwork for a law of mortality. First, let it be supposed that there are no migrations; or, and this comes to the same, that the numbers of emigrations and immigrations are equal, also that migrations do not influence the effects of the moral and physical media.

If the order of these collections followed previously is followed here, we get as many rates.

The first primary collection gives:—

The ratio in which those who, springing from t, after attaining the age θ are living at the end of $t + \theta$ (in the course of which year this attaining the age θ, happens), stand to those who, springing from t, attain the age θ:—

$${}_{\theta}l'_{t} = \frac{{}_{\theta}A_{t}^{t+\theta}}{{}_{\theta}V_{t}}.$$

The ratio in which those who, springing from t, die in the age-class θ, in the course of the year $t + \theta$, stand to those who, springing from t, attain the age θ:

$${}_{\theta}m'_{t} = \frac{{}_{\theta}M^{t+\theta}}{{}_{\theta}V}$$

It is evident that: ${}_{\theta}l'_{t} + {}_{\theta}m'_{t} = 1$.

The second primary collection gives:—

The ratio in which those who, springing from t and living at the end of $t + \theta$, attain the age $\theta + 1$, stand to those who, springing from t, live at the end of $t + \theta$:

$${}_{\theta}l''_{t} = \frac{{}_{\theta+1}V_{t}}{{}_{\theta}A_{t}^{t+\theta}}.$$

The ratio in which those who, springing from t, die in the course of $t + \theta + 1$ before attaining the age $\theta + 1$, stand to the collection ${}_{\theta}A_{t}^{1+\theta}$:—

$${}_{\theta}m''_{t} = \frac{{}_{\theta}M_{t}^{t+\theta+1}}{{}_{\theta}A_{t}^{t+\theta}}.$$

It is evident that ${}_{\theta}l''_{t} + {}_{\theta}m''_{t} = 1$.

The first secondary collection gives:—

The ratio in which those, who springing from t attain the age $\theta + 1$, stand to those, who springing from t attain the age θ:—

$${}_{\theta}p_{t} = \frac{{}_{\theta+1}V_{t}.}{{}_{\theta}V_{t}}$$

The ratio in which those, who springing from t die in the age-class θ, stand to those who, springing from t, attain the age θ:—

$$ {}_{\theta}q_t = \frac{{}_{\theta}M_t}{{}_{\theta}V_t}. $$

It is evident that: ${}_{\theta}p_l + {}_{\theta}q_t = 1$.

It will be seen that: ${}_{\theta}p_t = {}_{\theta}l'_t \times {}_{\theta}l''_t = 1 - {}_{\theta}m'_t - {}_{\theta}m''_t + {}_{\theta}m'_t\,{}_{\theta}m_t''$. Also that ${}_{\theta}q_t = {}_{\theta}m'_t + {}_{\theta}m''_t - {}_{\theta}m'_t\,{}_{\theta}m''_t \ldots$ (1.)

The second secondary collection gives:—

The ratio in which those who, springing from t, live at the end of t + 1, stand to those who, springing from t, live at the end of t:—

$$ {}_{\theta}P_t = \frac{{}_{\theta+1}A_t^{t+\theta+1}}{{}_{\theta}A_t^{t+\theta}}. $$

Further: The ratio in which those who, springing from t, die in the course of $\tau + 1$, stand to those who, springing from t, live at the end of τ:—

$$ {}_{\theta}Q_t = \frac{M_t^{t+\theta+1}}{{}_{\theta}A_t^{t+\theta 1}}. $$

It is evident that ${}_{\theta}P_t + {}_{\theta}Q_t = 1$. It will be seen that ${}_{\theta}P_t = {}_{\theta}l''_t \times {}_{\theta+1}l'_t$; ${}_{\theta}Q_t = m''_t + {}_{\theta+1}m'_t - {}_{\theta}m''_t\,{}_{\theta+1}m'_t \ldots$ (2).

The third secondary collection gives:—

The ratio in which the sum of those who, springing from t, attained the age $\theta + 1$, and of those who, springing from t + 1, were living at the end of $t + \theta + 1$, stand to the sum of those who, springing from t, were living at the end of $t + \theta$, and of those who, springing from t + 1, attain the age θ:—

$$ {}_{\theta}L^{t+\theta+1} = \frac{{}_{\theta+1}V_t + {}_{\theta}A_{t+1}^{t+\theta+1}}{{}_{\theta}A_t^{t+\theta} + {}_{\theta}V_{t+1}}. $$

Further: the ratio in which those who, springing from t, died in the course of $t + \theta + 1$, stand to the sum of those who, springing from t, were living at the end of $t + \theta$, and of those who, springing from t + 1, attained the age θ:—

$$ {}_{\theta}K^{t+\theta+1} = \frac{{}_{\theta}M_t^{t+\theta+1} + {}_{\theta}M_{t+1}^{t+\theta+1}}{{}_{\theta}A_t^{t+\theta} + {}_{\theta}V_{t+1}}. $$

It will be seen that ${}_{\theta}L^{t+\theta+1} + {}_{\theta}K^{1+\theta+1} = 1$. It is impossible to express L and K by means of l′, l″, m′ and m″ alone. The simplest expression will be found to be:—

$$ {}_{\theta}L^{1+\theta+1} = \frac{{}_{\theta}A_t^{t+\theta} \times {}_{\theta}l''_t + {}_{\theta}V_{t+1} \times {}_{\theta}l'_{t+1}}{A_t^{1+\theta} + {}_{\theta}V_{t+1}}; $$

$$ {}_{\theta}K^{t+\theta+1} = \frac{{}_{\theta}A_t^{t+\theta} \times {}_{\theta}m_t'' + {}_{\theta}V_{t+1} \times {}_{\theta}m'_{t+1}}{{}_{\theta}A_t^{t+\theta} + {}_{\theta}V^{t+1}}. $$

From these formulæ it appears that the collections of deaths, and the rates calculated from them, as they were formed till a few years ago, though seemingly simple, are in reality very complicated. Were it not with a view of reducing such collections formerly made to collections of the other kinds, by aid of the theory of probability, they might in future be safely relinquished.

§ 2. It is sufficient to seek the rates of mortality, those of vitality being their compliments to 1.

In the determination of ${}_{\theta}q_t$ the fundamental fact is the being born in a given year, equivalent to the attaining a given age in a given year. The accepting the year as unit makes it impossible to tell, if the fact of being born and of attaining a given age in the course say of a given month will give different results for the different months. The assertion will not be too bold, that for the higher values of θ, the difference is next to nothing. For the first years of age, smaller intervals of the different elements can be assumed in order to find the said influence.

In the determination of ${}_{\theta}Q_t$ the fundamental condition is the being alive at a given date in a given age-class. Besides the causes of differences mentioned just now, there are others; the limiting cases need only be recalled to show that here is a greater cause of differences; for suppose that all births happened at the beginning of the year of birth, the problem will be to determine the ratio in which those who die before attaining the age $\theta + 2$ to those who attain the age $\theta + 1$, while if all births had happened at the end of the birth-year, the problem would be to determine that ratio for $\theta + 1$ and θ. Doubtless the continual varying density of births and of deaths, and also the migrations, will cause different distributions of the living over the age-class, and by that different values of the fraction sought. In the determination of ${}_{\theta}K^{t+\theta+1}$ still greater differences must be expected in its values for a same θ combined with different values of t; as not only all causes discussed above will be at work, but, besides these, the proportion between ${}_{\theta}A_t^{t+\theta}$ and ${}_{\theta}V_{t+1}$ will be different for different values of t. If it be possible to eliminate from the registers all migrations, or to find a group of some extent where there were none, the determination of these rates will have a great scientific value.

The series l′, m′, l″, m″, must be regarded as auxiliary quantities.

A series ${}_{0}q_1$, ${}_{1}q$, etc., ${}_{\theta}q_1$ gives a general view of the generation t's mortality in succeeding age-classes.

The series ${}_{\theta}q_t$, ${}_{\theta}q_{t+1}$, etc., gives a general view of the varying mortality of succeeding generations at the age θ.

The series ${}_{\theta}Q_t$, ${}_{\theta+1}Q_t$, etc., gives a general view of the mortality of the generation t in succeeding years.

§ 3. The influence of migrations upon the above rates must next be investigated. The migrations shall be considered not as forces disturbing the regular effect of killing-forces, but as matter successively entering into or leaving the mass on which these operate. Unless every migration be considered by itself, and its influence be calculated both for the time which the migrating person has spent within or without the group, and for the accurate age at his migration, which supposition would require a complete knowledge of the laws of mortality, some hypothesis must be made. The simplest will be that for each primary collection the migrations belonging to it are distributed equally and continuously over the triangle representing it, at least as a first working hypothesis.

(*a*) *First primary collection.* We suppose that ${}_{\theta}m'_t$ is the true value of the fraction indicating the ratio in which the deaths before the end of $t + \theta$, etc., stand to ${}_{\theta}V_t$; the number of deaths will be: ${}_{\theta}V_1 \times {}_{\theta}m'_t$.

There are, however, amongst the observed deaths some of persons not having belonged to ${}_{\theta}V_t$, while of ${}_{\theta}V_t$ some have died without the group, and so have not been registrated. The former were immigrants, the latter emigrants. In practice it will be found almost impossible to find these out, at least the latter.

Now the hypothesis is that migrations are distributed equally and continuously over the triangle A B C (Fig. 12). We may conceive them to be concentrated in its centre of gravity, corresponding to their being born at the end of the first four months of t, and to their age at migration being $\theta + \frac{1}{3}$. Let there be no causes of deaths, the mean time spent by the emigrants without the group would then be one-third year, as also the time spent by the immigrants within the group. To the observed number of deaths within the group must be added the number of deaths occurring amongst the emigrants without the group; while from it must be subtracted the number of deaths occurring within the group amongst the immigrants. What are these numbers? Suppose that the value of ${}_{\theta}q_t$ were known, and let ${}_{\theta}E_t^{1+\theta}$ and ${}_{\theta}I_t^{1+\theta}$ be the registrated collections of migrations. The error made will be small, if it is assumed that the number of persons springing from t, who died after attaining the age $\theta + \frac{1}{3}$, and before attaining the age $\theta + \frac{2}{3}$, is equal to $\frac{1}{3}\,{}_{\theta}q_t \times$ the number attaining the age $\theta + \frac{1}{3}$, The following considerations will give an approximation of this error. A number of consecutive births, supposed to be distributed continuously over the period in the course of which they were born be represented by f (0); the number that of the same generation attains the age θ be f (θ). Thus the different influences of the time of birth, and of the various epochs of attaining a same age are eliminated while the births as well as the decrease by deaths are thought to be continuous, which is contrary to facts. Let f ($\theta + d\theta$) be the number attaining the age $\theta + d\theta$; $\frac{f(\theta) - f(\theta + d\theta}{f(\theta)}$, the density of deaths at the age θ. It is a function of θ. $\frac{f(\theta + d\theta) - f(\theta)}{f(\theta)} = -\phi(\theta)d\theta = \frac{df(\theta)}{f(\theta)} = d\,[\log.\ f(\theta)$. Integration between the limits θ' and θ'' gives: $\frac{f(\theta'')}{f(\theta')} = e^{-\int_{\theta'}^{\theta''}}\phi(\theta)d\theta$.

If the first years after birth (where there are few migrations, and for which, moreover, a smaller unit can be employed) and the highest ages are excepted (the latter also having few migrations), the hypothesis may be made that $\phi(\theta)$ does not vary for an age-class of one year. Let its constant value be a. Then

$$ {}_{\theta}q_t = \frac{f(\theta) - f(\theta + 1)}{f(\theta)} = 1 - e^{-a}. $$

Applying the formula to the case in question, and calling the fraction sought q′, we find

$$ q' = \frac{f(\theta + \frac{1}{3}) - f(\theta + \frac{2}{3})}{f(\theta + \frac{1}{3})} = \frac{e^{-a(\theta + \frac{1}{3})} - e^{-a(\theta + \frac{2}{3})}}{e^{-a(\theta + \frac{1}{3})}} = 1 - e^{-\frac{1}{3}a}. $$

Then

$$ \frac{{}_{\theta}q^t}{q'} = \frac{1 - e^{-a}}{1 - e^{-\frac{1}{3}a}} = 1 + e^{-\frac{1}{3}a} e + {}^{-\frac{2}{3}a} = 3 - a + \frac{5a^2}{1, 2 \ldots 9} - \text{etc.} $$

$$ + (-1)^n \frac{(2^n + 1)a^n}{1, 2 \ldots n 3^n}. $$

As $a = -\log.(1 - {}_{\theta}q)$ is small for the ages considered, the terms following the second may be neglected, and the relation will be found: $q' = \frac{{}_{\theta}q}{3 - a}$; and by substituting ${}_{\theta}q$ for a, $q' = \frac{{}_{\theta}q}{3 - {}_{\theta}q}$; ${}_{\theta}q$ is in the main small enough to justify our employing $q' = \frac{{}_{\theta}q}{3}$. This value gives the formula:—

$$ {}_{\theta}V_t \times {}_{\theta}m'_t = {}_{\theta}M_t^{t+\theta} - \tfrac{1}{3}\, {}_{\theta}q_t \, {}_{\theta}(I - E)_t^{t+\theta} \ldots (3). $$

β. *Second Primary Collection.*

${}_{\theta}A_t^{t+\theta}$ being the number of persons sprung from the generation t, living at the end of $t + \theta$ in the age-class θ, of these there will die in the class θ, in the course of $t + \theta + 1$: ${}_{\theta}A_t^{t+\theta}\ {}_{\theta}m''_t$.

The observed collection of deaths ${}_{\theta}M_t^{t+\theta+1}$ is different from this hypothetical one. To the observed collection there must be added those who having belonged to our ${}_{\theta}A_t^{t+\theta}$, after emigration have died in the class θ without the group. From ${}_{\theta}M_t^{t+\theta+1}$ must be subtracted those who, having made a part of a collection ${}_{\theta}A_t^{t+\theta}$ elsewhere, after immigration in the class θ, have died within the group before attaining the age $\theta + 1$.

If, or rather as it is impossible to number them directly, again continuous distribution is supposed, now over the triangle A C D representing this second primary collection, also their concentration in its centre of gravity E, which hypothesis corresponds to their being born after two-thirds of the year t have passed by, and to their having attained the age $\theta + \frac{2}{3}$ at their migration. By the principles explained in (*a*), the correction to be applied to ${}_{\theta}M_t^{t+\theta+1}$ is ${}_{\theta}(I - E)_t^{t+\theta+1} \times \frac{1}{3}{}_{\theta}q_t$; while for determining ${}_{\theta}m_t''$ we have the relation:—

$$ {}_{\theta}A_t^{t+\theta} \times {}_{\theta}m''_t = {}_{\theta}M_t^{t+\theta+1} - \tfrac{1}{3}\, {}_{\theta}q_t \, {}_{\theta}(I - E)_t^{t+\theta+1} \ldots (4). $$

Secondary Collections.

a. First Secondary Collection.—We found ${}_{\theta}q_t = {}_{\theta}m'_t + {}_{\theta}m''_t - {}_{\theta}m'_t\, {}_{\theta}m''_t$.. (1). From (1), (3), and (4), by successive approximation, the value of ${}_{\theta}q_t$ is found. The first step is to neglect in (3) and (4), the terms containing ${}_{\theta}q_t$. After the values of m' and m'' thus obtained have been introduced into (1), the value of ${}_{\theta}q_t$ calculated from it is introduced into (3) and (4). With the values of m' and m'' now calculated, we enter again into (1). It will be found that the differences decrease very quickly.

We may proceed to the direct determination of ${}_{\theta}q_t$. The observed collection of deaths needs correction. (See Fig. 12.)

Amongst ${}_{\theta}M_t$ there will be found some, not having belonged to ${}_{\theta}V_t$ within the group who, standing in the class θ at their immigration, have died within the group still standing in the same age-class. We suppose that in our diagrams the migrations are continuously distributed over the square ABCD; they may be conceived to be concentrated in the centre. This corresponds to their being born at half the year t, and to their having to live within the limits of the collections from the age $\theta + \frac{1}{2}$ till $\theta + 1$. According to the above principles, the correction for ${}_{\theta}M_t$ will be: $-\frac{1}{2}\,{}_{\theta}q_{t\theta}\,(I - E)_t$.

From the relation: ${}_{\theta}V_t \times {}_{\theta}q_t = {}_{\theta}M_t - \frac{1}{2}\,{}_{\theta}q_t\;{}_{\theta}(I-E)_t$....(5), ${}_{\theta}q_t$ is found.

The primary collection being known, and being in general unequal, the following considerations will give a more correct value, and the respective method will be preferable: ${}_{\theta}(I - E)_t^{t+\theta}$, considered to be concentrated in the centre of gravity of ABC, have still to spend in the age-class θ, $\frac{2}{3}$ year; ${}_{\theta}(I - E)_t^{t+\theta+1}$, considered to be concentrated in the centre of gravity of ADC, have still to spend in the age-class θ, $\frac{1}{3}$ year; the correction wanted by ${}_{\theta}M_t$ is:—

$$-\left[\tfrac{2}{3}\,{}_{\theta}q_t\;{}_{\theta}(I - E)_t^{t+\theta} + \tfrac{1}{3}\,{}_{\theta}q_t\;{}_{\theta}(I - E)_t^{t+\theta+1}\right] = -M' \times {}_{\theta}q_t,$$

$$\text{and the value of } {}_{\theta}q_t = \frac{{}_{\theta}M_t}{{}_{\theta}V_t + M'} \;\ldots\; (6).$$

If ${}_{\theta}(I-E)_t^{t+\theta} = {}_{\theta}(I - E)_t^{t+\theta+1} = \frac{1}{2}\,{}_{\theta}(I-E)_t$ this expression is reduced to (5), as it ought.

b. Second Secondary Collection.

See Fig. (13).—By (2), ${}_{\theta}Q_t = {}_{\theta}m''_t + {}_{\theta+1}m'_t - {}_{\theta}m''t$, ${}_{\theta+1}m'_t$ may be calculated, if in the indirect determination of ${}_{\theta}q_t$ and ${}_{\theta+1}q_t$ we have found ${}_{\theta}m_t''$ and ${}_{\theta+1}m_t'$. By a more direct computation ${}_{\theta}Q_t$ is found thus: Suppose ${}_{\theta}Q_t$ to be known; of the collection ${}_{\theta}A^{t+\theta}$ there will die in the course of $t + \theta + 1$: ${}_{\theta}A_t^{t+\theta} \times {}_{\theta}Q_t$. The observed collection of deaths will give another value; for amongst its number there will be found some deaths of persons not having belonged to the ${}_{\theta}A_t^{t+\theta}$ of the group in question, but belonging to the collection $I_t^{t+\theta+1}$. Then of the collection $A_t^{t+\theta}$ some will die without the group after emigration. Both of the collections of migrations are again considered to be concentrated in the centre of gravity of ABCD. This corresponds to their being born at half of the year t, and to their migrating at the age $\theta + 1$; therefore to their having still to live for half-a-year in the class of age $\theta + 1$, causing errors in $M_t^{t+\theta+1}$, and making ${}_{\theta}Q_t = \dfrac{M_t^{t+\theta+1} - \frac{1}{2}\,{}_{\theta+1}q_t\,(I - E)_t^{t+\theta+1}}{{}_{\theta}A_t^{t+\theta}}$.

We may also employ the observed primary collections. ${}_{\theta}I_t^{t+\theta+1}$ and ${}_{\theta}E_t^{t+\theta+1}$ considered to be born at $\frac{2}{3}$ of the year t, and to have migrated, aged $\theta + \frac{2}{3}$, will have to live before the end of $t + \theta + 1$, or before their attaining the age $\theta + \frac{4}{3}$, $\frac{2}{3}$ year, the first $\frac{1}{3}$ in the class θ, the second in the class $\theta + 1$. Of these, I and E, there will die after migration before attaining the age $\theta + 1$, $\frac{1}{3}\,{}_{\theta}q_t \times$ these numbers, of those attaining this age $\theta + 1$, there will die before attaining the age $\theta + \frac{4}{3}$, a number found by multiplying by $\frac{1}{3}\,{}_{\theta+1}q_t$. The full correction will be:—

$$-\;{}_{\theta}(I - E)_t^{t-\theta+1}\left(\tfrac{1}{3}\,{}_{\theta}q_t + \tfrac{1}{3}\,{}_{\theta+1}q_t - \frac{1}{9}\,{}_{\theta}q_t \times {}_{\theta+1}q_t\right) = -M_1''.$$

The collections ${}_{\theta+1}I_t^{t+\theta+1}$ and ${}_{\theta+1}E_t^{t+\theta+1}$, in a similar manner as above, considered to be born at $\frac{1}{3}$ of the year t, and to have attained the age $\theta + \frac{4}{3}$ at the time of their migration, will have to live $\frac{1}{3}$ year in the class $\theta + 1$ before the end of the year $t + \theta + 1$; the corresponding quantity must also be applied to $M_t^{t+\theta+1}$.

$$-{}_{\theta+1}(I - E)_t^{t+\theta+1} \times \tfrac{1}{3}\,{}_{\theta+1}q_t = -M''_2.$$

For ${}_\theta Q_t$ we have, therefore, the formula:—

$${}_\theta Q_t = \frac{M_t^{t+\theta+1} - M''_1 - M''_2}{{}_\theta A_t^{t+\theta}}$$

c. Third Secondary Collection.

If we take the formula, $K^{t+\theta+1} = \dfrac{{}_\theta M_t^{t+\theta+1} + {}_\theta M_{t+1}^{t+\theta+1}}{{}_\theta A_t^{t+\theta} + {}_\theta V_{t+1}}$, we must correct the two primary collections of deaths which enter into it. Some persons will enter the group who have belonged to ${}_\theta A_t^{t+\theta}$ in another group, and from these there will die some, and be numbered amongst ${}_\theta M_t^{t+\theta+1}$. Some persons belonging to this group's ${}_\theta A_t^{t+\theta}$, will leave the group, and of those dying without its boundaries, it is impossible to get the number, unless by our former suppositions. The error in ${}_\theta M_t^{t+\theta+1}$ will by these suppositions (see second primary collection) be $= -\frac{1}{3}\,{}_\theta q_t\,{}_\theta(I-E)_t^{t+\theta+1} = -M_\alpha$. Similar considerations (see first primary collections), will give the error in ${}_\theta M_{t+1}^{t+\theta+1}$, as: $\frac{1}{3}\,{}_\theta q_{t+1}\,{}_\theta(I-E)_{t+1}^{t+\theta+1} = -M_\beta$

Therefore: $${}_\theta K^{t+\theta+1} = \frac{{}_\theta M_t^{t+\theta+1} - M_\alpha + {}_\theta M_{t+1}^{t+\theta+1} - M_\beta}{{}_\theta A_t^{t+\theta} + {}_\theta V_{t+1}}.$$

It must be confessed that it looks more bold, if, in accordance with what has been done in the other secondary collections, we try to give at once an expression for the whole error. If we suppose the migrations in the age-class θ, and the year of observation $t + \theta + 1$, to be distributed continuously over the parallelogram ABCD, and make the leap to their being concentrated in its centre of gravity, this comes to their migrating in the midst of the year $t + \theta + 1$; also to their all having to spend within the limits of the collection (and, therefore, being liable to die in the age-class θ) half-a-year, the immigrants, of course, within, the emigrants without the boundaries of the group. Now, after all our hypotheses, the hypothesis will be exact enough if we take for ${}_\theta q$: $\dfrac{{}_\theta q_t + {}_\theta q_{t+1}}{2}$; which value will make the error in ${}_\theta M^{t+\theta+1} = -\dfrac{{}_\theta q_t + {}_\theta q_{t+1}}{4}\,{}_\theta(I-E)^{t+\theta+1} = -M_\gamma$; and will give:

$${}_\theta K^{t+\theta+1} = \frac{{}_\theta M^{t+\theta+1} - M_\gamma}{{}_\theta A_t^{t+\theta} + {}_\theta V_{t+1}}.$$

These rates or proportions with the fundamental numbers (collections of equals or coevals) from which they have been calculated, not only give a general view of the vital circumstances within the group, but they form also with the corrected collections of deaths the quantities from which a law of mortality may be calculated, and the probabilities of death may be computed.

The series—

$$\begin{array}{lll} {}_0q_t, & {}_0q_{t+1}, & \text{etc.,} \\ {}_1q_t, & {}_1q_{t+1}, & \text{etc.,} \\ & \text{etc.,} & \end{array}$$

will, firstly, give the restricted law of mortality for each generation, and by combination a general law, which would be that used in the continuous calculation of annuities, etc.

It can be done either by a graphical method, or by a method of interpolation. In the graphical construction the series represents the consecutive measures of the direction of the broken line, approaching which as near as possible the curve of mortality must be drawn for the consecutive values of θ. In interpolating, these values represent different measures of the quantity $\frac{f(\theta)-f(\theta+1)}{f(\theta)}$.

The series—

$$\begin{array}{lll} {}_\theta Q_t, & {}_{\theta+1}Q_t, & \text{etc.,} \\ {}_\theta Q_{t+1}, & {}_{\theta+1}Q_{t+1}, & \text{etc.,} \\ & \text{etc.,} & \end{array}$$

represents the different values calculated *a posteriori* for different values of θ and t of the probability of dying in the next year for given numbers of coevals in a given age-class at a given time.

They would give the most probable number of deaths to be expected in the next year, with the probable error, for any degree of probability.

APPENDIX.

An attentive reading of this paper will have been sufficient to show that the methods employed till very recently in determining the mortality within a group were inefficient. Ignoring the difficulties, I will give some general statements.

Facts to be registrated may be multiplied almost at an indefinite rate; still a judicious choice will be able to give the required elements of a science of *demistics*.

At some time the living within a group are counted, their names, day of birth, civil state, "&c.," are registered, entered in the population's ledger (the register of the population), and to each person, *sui juris*, a legalised copy of his page and line in the register is given, implying that of all pertaining to him. The "&c." just mentioned envelopes any distinguishing quality which may be thought proper to be a subject of investigation and registration. Of course if it shall have worth, the same distinguishing qualities must be noted in all observations. Each new distinguishing quality will make the statistical department, as an engine of State, more powerful and more effective.

Facts to be registrated are—every birth, with date, sex, name, &c. . . . ; every marriage, divorce, both with . . . ; every emigration and immigration . . . ; every death, with . . .

If the habitation and the social position are mentioned, of course all groups must have a common scale.

These different observations will be entered in different auxiliary books. They must be entered in the ledger, either directly or from the auxiliary books. If by death, transmigration, marriage, or other causes, the name is struck off or brought over to another place, this may be done by differently coloured lines, permitting the recorded facts to be still readable; while in appropriate columns the cause of alteration and the former place or the place of the renewed registration will be stated.

Every alteration affecting the civil position, &c., or any distinguishing quality of a person holding a legalised copy or civil bill, also the alterations affecting those pertaining to him, must be communicated to the registration officials, who will register them, and have to state it in his civil bill, exactly conform to the ledger.

Chiefly in larger communities these civil bills will lessen the labour of registration officials; they will ensure accuracy, and be of the greatest advantage as legal documents in any civil transaction; they will largely contribute to public safety; while the labour, &c., accompanying every census might be greatly reduced, while their intervals can be greater.

Now the officials in the smaller groups will have to form the primary collections. For that they have only to note each fact in schedules of the following form:—

Age-Class.	Generation.	Year of Observation τ. Kind of Observation.
0	τ	
	$\tau - 1$	
1	$\tau - 1$	
	$\tau - 2$	
2	$\tau - 2$	
	$\tau - 3$	
etc.	etc.	etc.

If the date of the observed person's birthday lies before the date of observation, in the schedule reserved for the special kind of observation, and in the columns indicating the other distinguishing qualities, the annotation must be made in the highest class of age corresponding to his generation. If the date of the observed's birthday is after that of observation, it should be annotated in the lowest class of age corresponding to the generation to which the observed belongs. This may be done either thus, that every observation directly at registration is annotated in its proper place, or thus that it is done by transfer from the registers. It is neither difficult nor very labourious.

In the Netherlands, the primary collections of deaths are being formed since 1870; not, however, those of migrations.

The author was permitted to investigate the register of the population of the city of Deventer. The different collections, distinguished, as to sex, were formed by him for the period 1863-73. As the circumstances under which the register had been formed were such that it was impossible to obtain an *exact* initial value of coevals, no exact history could be given, nor accurate rates, or an analytical expression for the law of mortality of this city calculated. Still something was obtained. The annexed engraving (Fig. 14) gives a general view of the distribution of migrations over the different ages. The difference observed between male and female migrations being so small that they could not be indicated in an engraving of the given dimensions, they were combined. The migrations were those observed from 1862 till 1873. I dare not affirm that the numbers found are fully exact; this being caused by different circumstances, to explain which would be out of place here. Therefore the relations indicated by the engraving should only be regarded as determined separately for immigrants and emigrants; the curves to have no mutual relations. The diagram has been deduced from one of double the dimensions. Upon the horizontal axis, classes of five years have been indicated, one millimetre corresponding to one year. Upon the vertical axis every millimetre corresponds to four units. The construction of this engraving must be imagined to have been made as follows: let the number of immigrations in the class 0 be a′, in the class 1 be b′, in the class 2 be c′, etc. A rectangle is constructed, the base of which is the first millimetre, and the altitude of which is $=\frac{a'}{4}$; then a rectangle, the base of which is the second millimetre, and the altitude $=\frac{b'}{4}$, etc., the same construction for the following classes of age. The upper parallels and those parts of the constructive perpendiculars that are not common to two rectangles form a broken line, enclosing, with the vertical and horizontal areas, an area of $\frac{11075}{4}$ square millimetres; 11,075 being the total number of observed immigrations. A dotted curve is drawn, approaching, as much as possible, the constructed broken line; while at the same time care has been taken that the total area removed be equal to the area added.

A similar construction is effected for the emigrations to the number of 10,386, a full curve being drawn for them, inclosing an area of $\frac{10386}{4}$ square millimetres.

From this engraving it will be seen that the migrations at any age are by no means proportional to the living, nor to the dying at that age, but follow a particular law.

I take the liberty to subjoin in the annexed Tables I and II; firstly, the numbers of male and female immigrants and emigrants; secondly, the total numbers of immigrants and emigrants; thirdly, I give the numbers of the total of migrations in every age-class as deduced from a larger diagram, for which numbers I beg the privilege of their being viewed as a first graphical approximation. At the same time, I repeat what also for them must not be forgotten—that the numbers do not give with rigid exactitude what has in fact taken place, because, notwithstanding good measures, many stragglers are forgotten and lost in the books, etc.

I want to impress on my readers that these tables are by no means a good sample of what can be done with the method I have tried to explain in its principles, and of which I propose giving a popular, *i.e.*, non-algebraical description, with a description of the methods of registration in different countries. As some help for estimating the labour necessary in forming the primary collections, I will incidentally mention that all the deaths, immigrations, and emigrations, that amongst a population of about 18,000 happened in the course of about fourteen years, were annotated in schedules appropriate to the method in the space of about two months.

Perhaps it will not be useless to say something more about the taking a first

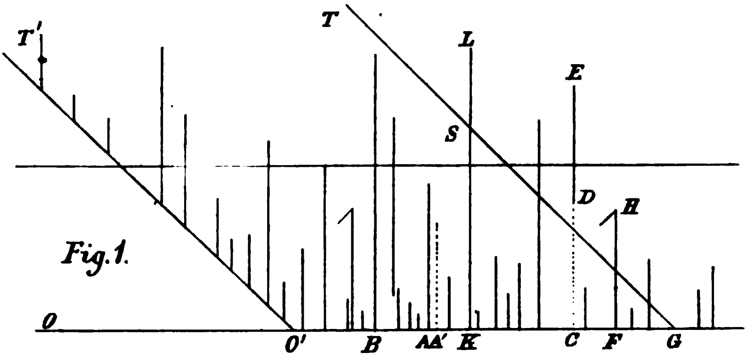


Fig. 1.

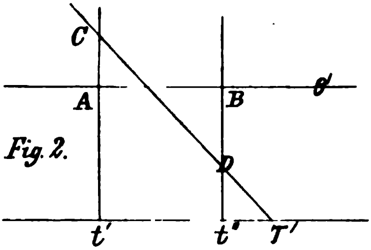


Fig. 2.

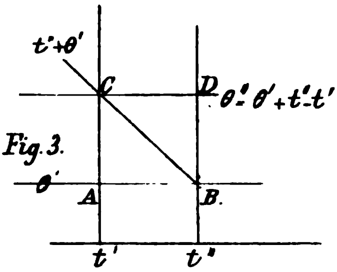


Fig. 3.

Fig. 4.

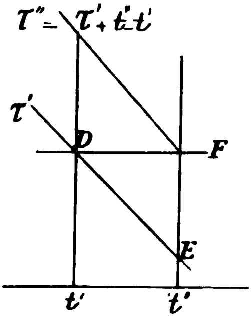


Fig. 5.

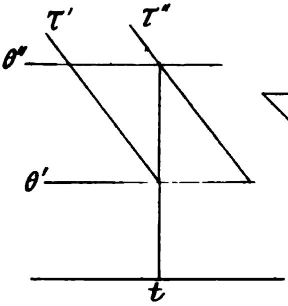


Fig. 6.

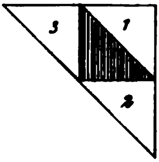
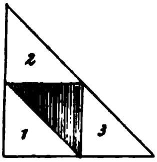


Fig. 7.



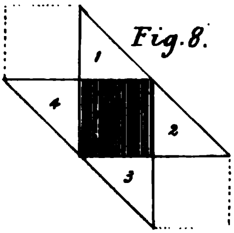


Fig. 8.

Fig. 9.

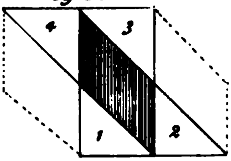


Fig. 10.

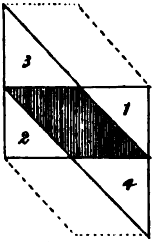


Fig. 11.

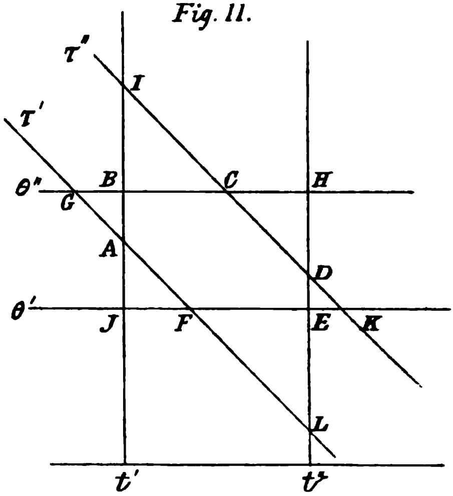


Fig. 12.

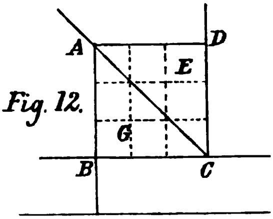


Fig. 13.

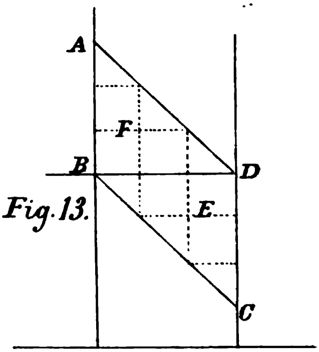
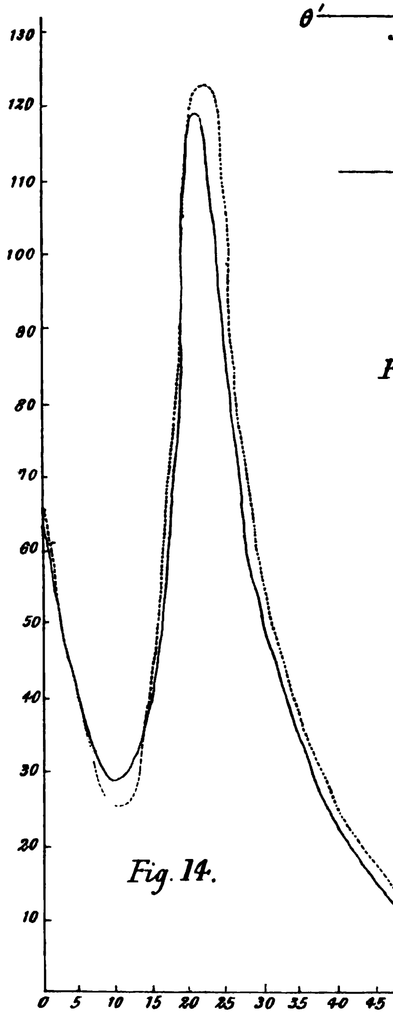


Fig. 14.



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approximation from a diagram. It does not present any difficulties which may not be overcome. The broken line will be constructed, which is formed by those parts of the sides of the rectangles which are not in common to two of them. Thus, at first view, many adjacent rectangles offer themselves, which may simply by taking from one and adding to another equal rectangles, make the resulting rectangles fit into the curve which offers itself, and indeed starts to view in its general outlines. At least always, if there is any vestige of regularity. This is sure to show itself very clearly, not only where there is a great number of facts caused by physical influences, but also in such cases as ours, where the occurrence of the facts depends for a great part on moral and social influences.

When your pencil has sketched such a curve, or rather a broken line, you may begin to measure the rectangular trapesia, the oblique sides of which are part of this broken line; the length of the perpendicular reared from the middle of the base to the broken line will measure them. There is, of course, a limit in the difficulty of taking the exact length, even if "papier quadrillé millimètre" is employed, which ensures for the rest great regularity. In comparing the area thus found to the area given by the observed numbers, very probably the accounts will be found not squaring. And even if this is the case, it may be that a positive error in one part is made up or hid by a negative error in another part.

Therefore, it will be best to divide the eighty-nine age-classes of our cases into smaller periods, whose limits in both are determined by the midst of those parts where a decided regularity in the numbers is fully marked.

These periods may be reconstructed on a larger scale (perhaps for one of the co-ordinates alone). For these periods, the same operations may be gone through which I tried to sketch shortly and generally.

If an analytical expression is wanted, the results so found will form an excellent foundation.

Say that such expressions are found $F_e(\theta)$ and $F_i(\theta)$ for emigrants and immigrants, if necessary, calculated for smaller periods; suppose that a mortality function $f(\theta)$ deduced from the successive values of q_θ, given by the method of the third chapter, is considered as only an approximative deduction. $F_e(\theta)$, $F_i(\theta)$, combined with this $f(\theta)$ and the observed numbers of primary collection of migrations, will give as exact corrections as any body may desire—at least, if the observations themselves are exact.

A. J. Verwey.

TABLE I.

Emigrants.					Emigrants.				
a	*b*	*c*	*d*	*e*	*a*	*b*	*c*	*d*	*e*
0	**133**	**121**	**254**	**250**	46	30	26	56	56
1	108	101	209	220	47	30	21	51	53
2	106	94	200	198	48	25	28	53	50
3	96	74	170	184	49	23	20	43	47
4	85	81	166	170	50	27	16	43	44
5	91	82	173	156	51	19	11	30	40
6	71	66	137	142	52	13	18	31	36
7	58	66	124	128	53	16	20	36	34
8	59	54	**113**	118	54	20	15	35	33
9	**51**	81	132	**114**	55	28	8	36	32
10	61	57	118	116	56	9	16	25	31
11	68	56	124	120	57	17	11	28	30
12	63	**44**	107	128	58	13	9	22	29
13	76	63	139	140	59	17	18	35	28
14	71	56	127	156	60	6	10	16	27
15	100	83	183	176	61	19	13	32	26
16	125	121	246	236	62	7	20	27	25
17	165	167	322	294	63	7	6	13	24
18	220	193	413	386	64	8	13	21	22
19	198	229	427	436	65	10	8	18	20
20	221	**273**	**494**	**478**	66	10	8	18	18
21	211	250	461	476	67	9	5	14	16
22	**233**	227	460	460	68	4	7	11	14
23	194	212	406	426	69	6	6	12	13
24	199	203	402	398	70	2	11	13	12
25	202	194	396	374	71	8	8	16	10
26	157	195	352	346	72	7	5	12	9
27	146	165	311	310	73	3	7	10	8
28	127	159	286	286	74	4	2	6	7
29	91	132	223	242	75	3	1	4	7
30	106	108	214	212	76	2	4	6	6
31	79	101	180	184	77	3	1	4	5
32	78	103	181	172	78	1	3	4	5
33	77	76	153	156	79	3	1	4	5
34	64	83	147	146	80	3	2	5	4
35	58	70	128	134	81	4	1	5	4
36	52	75	127	126	82	2	2	4	3
37	67	67	134	118	83	2	0	2	3
38	63	42	105	110	84	1	0	1	2
39	36	61	97	100	85	0	1	1	2
40	53	42	95	86	86	1	0	1	1
41	36	43	79	78	87	—	—	—	1
42	41	30	71	72	88	—	—	—	1
43	36	36	72	66	89	0	2	2	0
44	30	26	56	62					
45	35	31	66	59	Sums	5,119	5,267	10,386	10,388

Heads of columns :—Col. *a*. Age class, in which have emigrated.
„ *b*. Males, observed number.
„ *c*. Females, „
„ *d*. Males and females, observed number.
„ *e*. „ from diagram.

The total number of emigrations observed was: 10,386, amongst which were of men, 5,119; of women, 5,267.

Note.—The *maxima* and *minima* have been indicated by stouter figures.

TABLE II.

Immigrants.					Immigrants.				
a	*b*	*c*	*d*	*e*	*a*	*b*	*c*	*d*	*e*
0........	123	**125**	**248**	**254**	46........	38	31	69	63
1........	**126**	107	233	232	47........	25	29	54	59
2........	117	87	204	204	48........	23	28	51	54
3........	83	78	161	184	49........	25	19	44	49
4........	88	80	168	160	50........	30	18	48	45
5........	67	76	143	148	51........	21	25	46	42
6........	69	72	141	138	52........	23	12	35	39
7........	58	51	109	126	53........	22	12	34	36
8........	60	55	115	110	54........	17	17	34	34
9........	60	53	113	102	55........	19	12	31	33
10........	**40**	53	93	**93**	56........	21	14	35	33
11........	43	47	**90**	**93**	57........	18	17	35	33
12........	63	**45**	108	102	58........	17	18	35	32
13........	70	46	116	126	59........	16	15	31	32
14........	106	77	183	158	60........	11	20	31	32
15........	128	104	232	234	61........	19	12	31	31
16........	153	146	299	286	62........	12	10	22	31
17........	164	181	345	346	63........	16	19	35	30
18........	174	210	384	382	64........	18	15	33	30
19........	202	254	456	444	65........	10	9	19	29
20........	212	**264**	476	484	66........	11	16	27	28
21........	243	250	**493**	**492**	67........	6	6	12	26
22........	219	237	456	**492**	68........	10	5	15	22
23........	**247**	263	510	474	69........	6	6	13	18
24........	213	233	446	446	70........	6	1	7	13
25........	209	210	419	418	71........	3	8	11	10
26........	216	194	410	394	72........	7	8	15	8
27........	174	167	341	362	73........	3	4	7	7
28........	130	149	279	320	74........	3	4	7	6
29........	137	156	293	264	75........	6	2	8	6
30........	116	136	252	250	76........	2	4	6	6
31........	110	109	219	222	77........	4	3	7	5
32........	90	97	187	192	78........	2	2	4	4
33........	93	67	160	170	79........	0	2	2	3
34........	82	84	166	158	80........	1	1	2	2
35........	59	66	125	145	81........	1	2	3	2
36........	57	76	133	134	82........	1	1	2	2
37........	70	81	151	122	83........	1	3	4	2
38........	51	54	105	116	84........	0	2	2	1
39........	68	46	114	110	85........	0	0	0	1
40........	51	53	104	100	86........	1	1	2	1
41........	35	54	89	88	87........	0	1	0	1
42........	32	29	61	80	88........	—	—	—	—
43........	37	37	74	74	89........	—	—	—	—
44........	37	41	78	70					
45........	44	40	84	66	Sums....	5,501	5,574	11,075	11,106

Heads of columns:—Col. *a.* Age class, in which have immigrated.
„ *b.* Males, observed number.
„ *c.* Females, „
„ *d.* Males and females, observed number.
„ *e.* „ as deduced from diagram.

The total number of immigrations observed was: 11,075, amongst which were of men, 5,501; of women, 5,574.

Note.—The *maxima* and *minima* have been indicated by stouter figures.

II.—*Principles of Penal Legislation. By the* REV. JOHN T. BURT, *Chaplain of Broadmoor Criminal Lunatic Asylum; late Chaplain of the Birmingham Borough Prison; formerly Assistant Chaplain of Pentonville Prison.*

MONTESQUIEU laid it down as one proposition in political science, that the monarchical governments of Europe were founded upon a principle of honour. Further, he contended that this principle of honour involved the setting of a low value upon life, and of a high value upon property.

The principle thus indicated impressed itself strongly upon the penal laws which came down from the middle ages. Assaults and injuries to the person, and even homicide, were purged by fines; offences against property were punishable by death.

The elements of social life have undergone great changes, and the relative value of life and of property has been reversed.

Penal legislation has followed slowly in the wake of these social changes, and the severity of penalties for offences against property has been mitigated. But the question is raised, whether these changes in penal legislation have adequately recognised the principle, that property and life have no longer the same relative value.

Two propositions are submitted:

1. Assaults and injuries to the person are of the nature of offences against life. Often they imperil life; sometimes they impair it.

2. Imprisonment is of the nature of a penalty levied upon human life. It is a partial confiscation of life; it is civil death; it is social death; and it is made better than actual death only by hope of release.

These propositions being borne in mind, it is to be observed, on the one hand, that large classes of offences against the person are punished by penalties levied upon property; and, on the other hand, that offences against property, even of a trifling value, are punished by a confiscation of some portion of human life.

This paper is limited to the consideration of penalties for offences against property.

In 1873 there were passed, both by superior courts and by justices exercising summary jurisdiction, in all, 102,974 sentences to imprisonment. Of these, 30,603 sentences were for offences against property only, without violence or any other complication. The sentences for this class of offences were therefore to the whole number of sentences in the proportion of nearly 1 to 3.

The average daily population of all county and borough prisons during the same year was 17,590; of the convict prisons, 9,603; making together 27,193.

Assuming that sentences for offences against property do not differ materially from sentences for other offences, and if there is a difference they will be longer, then it will follow, that of the average daily prison population, amounting to 27,193, rather less than 9,000 were imprisoned for offences against property only. Further, assuming that the returns for 1873 were not exceptional, we arrive at the conclusion, that the protection of property in England and Wales, as the penal laws now are, and are now administered, involves the confiscation of human life to an extent equal to the entire lives in constant succession of nearly 9,000 men, women, and children.

If the constant confiscation of so much of human life is found by experience to be indispensable for the protection of property, then it ought to be adhered to;

but unless circumstances can be adduced from experience to prove the necessity for adhering to this method of treatment in all cases, there is a strong presumption in favour of the proposition that offences against property ought to be protected, so far as practicable, by penalties levied upon property, and not by penalties levied upon human life.

In support of this principle the appeal may be made to the most ancient laws. Under the Mosaic Code the penalty for offences against property was restitution, and a heavy fine levied when it was to be had upon the same kind of property.

When the appeal is made to experience, no evidence can be adduced that the writer is aware of, in contravention of this principle. On the contrary, experience is strongly in favour of every movement which has yet been made in the direction of more merciful legislation.

The abolition of capital punishment for offences against property was a departure from the principle of the old law of the extremest kind. Yet the criminal returns furnish the clearest evidence of a subsequent and great decrease of the gravest forms of crime. Other lesser changes have followed, and still the decrease of crime has been progressive.

It is well known that concurrently with these changes in the law, there has been a continous decrease of severity in the administration of it. Now the administering of the criminal law is vested in the judges on assize, in chairmen of quarter sessions, in recorders of boroughs, and in the whole magistracy of the country. This is a very numerous body, and it is constituted of men possessed of the widest and most authentic information as to the state of crime in their respective districts, and as to the effects of the penalties inflicted by themselves. When this large and well-informed body of judges continue to exercise the discretion vested in them more and more in the direction of leniency, this is evidence of the very highest character that the changes in the law, and the change in its administration, have worked well.

The testimony of Mr. Samuel Redgrave supplies this conclusion. In his report for 1859, published in 1860, he thus records the conclusion to which he was led by his extended investigations:—"The foregoing sentences are given in the following tables with greater minuteness for each of the last ten years, and are proof that *the decrease of the commitments has been concurrent with a diminished severity of the punishments.*"

Since the date of Mr. Redgrave's report, the criminal returns show a like lessening of the severity of the sentences going on concurrently with a decrease in the gravest forms of crime.

In 1859 the number of offenders committed for trial for indictable offences was 16,674: the number of sentences to penal servitude was 2,383. In 1873 the numbers of offenders committed for trial was 14,893; the number of sentences to penal servitude was 1,493. In 1859 proportion of sentences to this severer form of punishment was to the number committed for trial 14·2 per cent.; in 1873 it was 10·0 per cent. Yet the number of offenders committed for trial had decreased from 16,674 to 14,893, notwithstanding the increase of the population.

Sentences passed in individual cases thirty years ago, if recalled to recollection, will show how great is the change which has taken place in the severity of punishments.

There is one form of crime which enables us to bring the matter in question to the test of exact comparison. The number of forged notes presented for payment at the Bank of England has always been made a matter of record, and a return of the numbers was furnished to the Constabulary Commissioners, and was published by them in their first report, 1850. From this return, and from the criminal tables, the following results are obtained:

During ten years, from 1804 to 1814, no less than 133 persons were hung for forgery, and during these years the number of forged notes presented for payment at the Bank was 87,501. During the next ten years, from 1815 to 1824, again 133 persons were hung for forgery, and during these years the number of forged notes presented was 177,454. During the third period of ten years the better feeling of the country had been roused by Sir Samuel Romilly, and from 1825 to 1834 only 9 persons were hung for forgery; and in these years the number of forged notes presented for payment fell to 9,243. In 1833 capital punishment for forgery was abolished, and the number of forged notes presented in the years following were—in 1834, no return; in 1835, 279 notes; in 1836, 223 notes; in 1837, 267 notes. Since that year the record has not been published; but the criminal returns show that there has been no increase of this form of crime.

It is not contended that the decrease in the severity of punishment has been directly the cause of this consequent decrease of crime; but it is contended upon the ground of all this experience, with punishment and crime decreasing concurrently during half a century, that the amount of crime is determined mainly by other casual influences, and not mainly by the severity of the punishments.

It will not be pretended that the force of those other influences has been accurately measured. No proof, therefore, can be adduced that the limits of safety have been reached within which crime may be controlled and penalties be still further modified.

The adoption of the principle now advocated would tend to the lessening of crime by bringing the law more into accord with a natural sense of justice, and by ensuring more frequent prosecutions.

It is asked that this paper may be considered in conjunction with a paper read by the writer before the British Association at Belfast in 1873.

III.—*Memorandum on the Cost, Traffic, and Working of the Railways in the United Kingdom and in India, for the Year* 1874, *compared with* 1873.

By J. A. BAYNES, *Bombay, Baroda, and Central India Railway.*

1. IN the following memorandum and accompanying tables I propose to give a few figures illustrative of the cost, traffic, and working of our home and Indian lines for the year 1874 as compared with those of the previous year.

United Kingdom.

2. Taking first the railways in the United Kingdom, the open mileage in 1874, as given in the Board of Trade Returns, was 16,449, an increase of 367 miles, or 2·3 per cent. on 16,082, the mileage in 1873, of which increase 253 miles were on lines in England and Wales, 88 in Scotland, and 26 in Ireland. Of the total mileage, 8,749 miles, or 53·2 per cent., have been constructed with double lines of rails.

3. The total capital invested in these undertakings amounted to 609,895,931*l.*, showing an increase of 21,575,623*l.*, or 3.7 per cent. over 1873, and 40,848,585*l.*, or

7·2 per cent. over 1872. This additional capital is much in excess of that due only to the increased mileage, and has brought the per mile rate of construction cost from 35,984*l.* in 1872, and 36,574 in 1873, to 37,078*l.* in 1874. No doubt there have been considerable additions to the open line capital expenditure for station and siding accommodation, additional lines, and rolling stock, to meet the enlarged traffic, as well as the capital spent on new lines not opened, and the mileage of which is not yet brought into account.

4. The total train mileage in 1874 was 200,484,263, of which 96,749,953 miles were run with passenger trains, 100,025,939 with goods, and 3,708,371 with mixed trains. 12,188 train miles were run for every open mile, and the increase over 1873 was 3,129,514, or 1·6 per cent. The number of engines used for this service was 11,935 (an increase of 500 over 1873), and each engine ran on an average 16,800 miles in the year, and earned 4,965*l.*

5. The total number of passengers of all classes (except season ticket holders, who numbered 493,957) was 477,840,411, compared with 455,320,188 in 1873, and 422,874,822 in 1872, thus giving an increase of 22,520,223, or 5 per cent. over 1873, and 54,965,589, or 13 per cent. over 1872. The increase both in numbers and receipts of the different classes in 1874 over 1873 was as follows:—

Passenger Traffic, Increase 1874 *over* 1873.

	Numbers.	Per Cent.	Receipts.	Per Cent.
			£	
First Class	964,005	2·52	126,077	2·88
Second „	1,935,535	2·75	114,463	2·87
Third „	19,620,683	5·66	596,017	5·07
Total	22,520,223	4·95	836,557	4·16

6. The following was the percentage of the different classes of travellers both in numbers and receipts for the years 1872, 1873, and 1874, viz.:—

	1872.		1873.		1874.	
	Numbers.	Receipts.	Numbers.	Receipts.	Numbers.	Receipts.
		£		£		£
First Class	8·91	23·0	8·41	21·75	8·22	21·48
Second „	17·14	22·3	15·45	19·81	15·12	19·57
Third „	73·95	54·7	76·14	58·44	76·66	58·95
Total	100·00	100·0	100·00	100·00	100·00	100·00

The numbers of passengers per open mile were 29,050 in 1874, 28,312 in 1873, and 26,741 in 1872.

7. The tonnage of goods and minerals conveyed amounted to 188,538,852, as compared with 190,953,457 in 1873, thus showing a falling off of 2,414,605, or 1·3 per cent., which arose almost entirely in minerals, and was no doubt due to the depressed condition of the iron and coal trades. The receipts from goods traffic, however, exceeded those in 1873 by 184,354*l.*, which seems to show either that higher rates have been obtained, or that the goods have been carried longer distances.

8. The receipts for the foregoing work were as under, viz.:—

	Receipts in 1874.	Increase over 1873.	Increase per Cent.
	£	£	
For passengers	24,893,615	1,039,723	4·4
„ goods and minerals	32,005,883	184,354	0·6
„ miscellaneous	2,356,217	289,638	14·0
Total	59,255,715	1,513,715	2·6

This increase is only a very moderate one compared with that of the three previous years; but this has already been partly accounted for under the head of goods traffic. The gross receipts were 3,602*l.* per open mile, and 5·91*s.* per train mile, compared with 3,590*l.* and 5·85*s.* in 1873, and 3,366*l.* and 5·58*s.* in 1872.

9. We must now turn to the other side of the account, and see at what cost this huge business of locomotion has been carried on. The working expenses were as under, viz.:—

	Working Expenses in 1874.	Increase over 1873.	Increase per Cent.
	£	£	
Maintenance	6,555,110	671,714	11·4
Locomotive	9,031,037	(less) 127,457	(less) 1·4
Carriage and waggon	2,558,719	170,591	7·1
Traffic	9,050,348	619,581	7·3
Miscellaneous	5,417,498	525,435	10·7
Total	32,612,712	1,859,864	6·0

It would thus appear that while the gross receipts increased only at the rate of 2·6 per cent., the increase of working cost was at the rate of 6 per cent., or more than double, and the percentage rate of working to receipts was increased from 49 in 1872, and 53 in 1873, to 55 in 1874. The expenses per open mile and per train mile were respectively 1,983*l.* and 3·25*s.* in 1874, 1,912*l.* and 3·12*s.* in 1873, and 1,662*l.* and 2·76*s.* in 1872.

10. The rapid increase that has taken place in the cost of railway working in the United Kingdom during the last four years, is strikingly illustrated by the following figures, viz.:—

	Increased Receipts.	Increased Cost.	Percentage of Increased Cost to Receipts.
	£	£	
1871 over 1870	3,814,637	1,437,335	37·67
'72 „ '71	4,342,730	3,140,444	71·95
'73 „ '72	4,506,490	4,459,544	99·00
'74 „ '73	1,513,715	1,859,864	122·87

The material reduction in the price of coal has resulted in a less charge in 1874, under the head of "locomotive," notwithstanding the large additional train mileage, but there are very serious increases under the heads of "maintenance."

"traffic," and "miscellaneous," arising, no doubt, from the increase in wages, the wear and tear from the additional traffic, the increasing introduction of steel rails in maintenance, and the block system of working.

It is somewhat difficult to see how this enlarged cost is to be materially reduced; but some relief may possibly be obtained, especially as the full benefit of the diminished price of coal was not experienced till the present year.

11. It cannot but be considered unsatisfactory, from a shareholder's point of view, that not only were all the extra receipts, amounting to 1,513,715*l.*, absorbed by the additional cost of working in 1874, but the net receipts were absolutely 346,149*l.* less than in 1873, the amount being 26,643,003*l.*, as compared with 26,989,152*l.* The net earnings per open mile and per train mile were 1,704*l.* and 2·82*s.* in 1872, 1,678*l.* and 2·73*s.* in 1873, and 1,619*l.* and 2·66*s.* in 1874; while the average return on the capital invested was 4·74*l.* per cent. in 1872, 4·59*l.* in 1873, and 4·37*l.* in 1874.

This is certainly a very moderate return on the large amount of capital spent on these most useful undertakings, which have conferred such benefits on our population, and done so much to develop the commerce and industry of our country.

India.

12. We will now make a similar comparison for our Indian railway system, which is nearly a quarter of a century younger, and is still only in its infancy.

13. From the returns given in the recently issued report of the Government Director, Mr. Juland Danvers, it appears that there were 6,142 open miles of railway at the end of 1874 (an increase of 558 miles, or 10 per cent. over 1873), and the average open mileage for that year was 5,997. The capital spent on these lines (exclusive of the stores in hand) amounted to 92,395,440*l.* (an addition of 5,066,445*l.* on 1873, or 5·8 per cent.), and the average cost of construction per open mile was 14,975*l.* 927 miles, or 15·1 per cent., have been laid with double lines of rails. Recent branch lines have been constructed on the standard gauge of 5 ft. 6 in., with rails of 60 lbs. to the yard, at a cost of little over 4,000*l.* per mile, exclusive of rolling stock. Of the open mileage, 5,633 miles have been constructed by the Guaranteed Companies, and 509 by the State. Of these, 5,599 miles are on the 5 ft. 6 in. gauge, and 543 miles are on the metre or 3 ft. 3⅜ in. gauge. There were many and various circumstances connected with the introduction of railways into India, and their early history, which materially enhanced their cost, but it is clearly proved that they can now be constructed there on the 5 ft. 6 in. gauge at a moderate rate of cost, and there is still great need for a considerable increase of this important means of communication throughout our Indian empire. The total length at present sanctioned by Government, including the open mileage given above, is 8,640¾ miles.

14. In regard to the traffic and working of the Indian lines, no doubt the year under review was somewhat exceptional through the famine which prevailed in some of the Bengal districts, in the successful relief of which the Government were so essentially aided by railway communication, four of the lines (and principally the East Indian) having carried between them upwards of 900,000 tons of food grains for the famine-stricken districts.

15. The total train mileage in 1874 was 18,475,322, of which 6,565,844 miles were run with passenger trains, and 11,909,478 with goods and minerals. The increase in mileage over 1873 was 2,824,725, or 18 per cent., while the number of

train miles run for every open mile of railway was 3,081, or about one-fourth of that on our home lines. The system of traffic working carried out in India is, as far as possible, to run few trains, well loaded and at a moderate speed. The gross earning per train mile was 8·32*s.*, compared with 5·91*s.* in this country, and a much larger proportion of the receipts was furnished by goods traffic than is the case here. This will be seen by the following figures:—

	Percentage Apportionment of Gross Receipts.	
	India.	United Kingdom.
For passengers	28·2	42·0
" goods and minerals	67·9	54·0
" miscellaneous	3·9	4·0
Total	100·0	100·0

The number of engines employed in this service was 1,345 (an increase of 52), and each engine ran on an average 13,736 miles in the year, and earned 5,711*l.*

16. The total number of passengers of all classes (except season ticket holders, who numbered 17,420) was 24,271,776 (or 4,047 per open mile), being an increase of 2,028,556, or 9·1 per cent. over 1873. Of these, the third and fourth classes furnished 95·3 per cent. in numbers, and 86·9 per cent. in receipts.

17. The total tonnage of merchandise and minerals conveyed was 5,350,466 (or 892 per open mile), an increase of 1,304,578, or 32·2 per cent. on 1873. The special famine traffic partly accounts for this large increase.

18. The receipts for the foregoing work were as follow, viz.:—

	Receipts in 1874.	Increase over 1873.	Increase per Cent.
	£	£	
For passengers, &c.	2,184,198	(less) 4,724	(less) 0·2
" goods and minerals	5,202,269	" 975,694	" 23·1
" miscellaneous	295,018	" 38,841	" 15·2
Total	7,681,485	1,009,811	15·1

The falling off in the passenger receipts is under the head of mails, and special and troop trains, rather than in the ordinary payments by passengers.

19. The total passenger traffic may be represented by 1,405,886,720 passengers carried a mile for an average payment of about 0·375*d.* per passenger, a much smaller figure than is charged for the same service in this country.

20. The goods traffic (which, as already explained, included the food grain traffic for the famine-stricken districts) is represented by 1,102,955,185 tons conveyed one mile for an average payment of 1·114*d.* per ton, a rate that certainly cannot be considered excessive. The average distances travelled both by passengers and goods are no doubt much greater in India than in this country, being 58 and 206 miles respectively; but, unfortunately, the returns for the home lines do not give this information, nor do they state the tonnage of goods conveyed. General trade has continued dull in India; station roads and feeder branches are still required, and some of the trunk lines are as yet incomplete.

21. With regard to the working cost, the figures are more satisfactory than in former years. In comparing them with those of the home lines, it must be remembered that a large portion of the railway material used in India has to be sent out from home with the added charges of freight, insurance, shipping, and landing; that on several of the lines English coal has to be used, the high price of which has told considerably on the last year's cost, and that skilled labour has still to be largely supplied from this country. The percentage of goods traffic (which is much the more costly to work) is decidedly greater in India, being 67·9 per cent. of the whole, as compared with 54 per cent. in the United Kingdom.

22. The working cost was as under, viz.:—

	Working Expenses in 1874.	Increase over 1873.	Increase per Cent.
	£	£	
Maintenance	825,320	12,790	1·6
Locomotive	1,229,111	129,301	11·8
Carriage and waggon	352,632	58,529	19·1
Traffic	771,114	137,508	21·7
Miscellaneous	524,424	(less) 126,685	(less) 19·4
Total	3,702,601	211,443	6·06

It thus appears that an increase of receipts over 1873 to the extent of 15·1 per cent. has been obtained by an increased cost of only 6·06 per cent., and the percentage cost of working to the gross receipts which was 54·60 in 1872, and 52·33 in 1873, has now been brought down to 48·20.

The following table will show how the home and Indian lines have somewhat changed places in regard to the cost of working during the last three or four years:—

	Working Cost at a Percentage of Gross Receipts.			
	1871.	1872.	1873.	1874.
Railways in the United Kingdom	47·35	49·39	53·02	55·04
Railways in India	53·43	54·60	52·33	48·20

The train mile rate on the Indian lines in 1874 was 4·01*s.*, compared with 4·46*s.* in 1873, and 4·71*s.* in 1872.

23. There is a considerable diversity in the circumstances under which the lines on the western side of India are worked, from those on the eastern. On the former, the monsoon prevails for three months in the second half of the year, the effect of which is very prejudicial in diminished revenue and increased cost. The busy season on the Bombay lines is confined principally to some three or four months in the first half of the year, when every exertion has to be made and considerable extra expense incurred to carry the traffic with efficiency and dispatch; while in the second half of the year the fixed expenses cannot be reduced in proportion to the diminished monsoon traffic. A more regular traffic throughout the

year can no doubt be carried with much greater economy. These varieties of working are shown in the following figures:—

Lines in Eastern India.

	East Indian.			Eastern Bengal.		
	Gross Receipts.	Per Cent. of Year's Receipts.	Working Cost at per Cent. of Receipts.	Gross Receipts.	Per Cent. of Year's Receipts.	Working Cost at per Cent. of Receipts.
	£			£		
1872, 1st Half...	1,344,768	55·2	38·66	128,528	43·4	79·00*
2nd „	1,092,246	44·8	44·40	167,404	56·6	61·54
Year 1872	2,437,014	100·0	41·23	295,932	100·0	69·13
1873, 1st Half...	1,324,035	51·3	37·00	149,109	47·4	52·30
2nd „	1,255,079	48·7	38·20	165,757	52·6	50·06
Year 1873	2,579,114	100·0	37·59	314,866	100·0	51·12

* Special repairs included.

Lines in Western India.

	Great Indian Peninsula Railway.			Bombay, Baroda, and Central India Railway.		
	Gross Receipts.	Per Cent. of Year's Receipts.	Working Cost at per Cent. of Receipts.	Gross Receipts.	Per Cent. of Year's Receipts.	Working Cost at per Cent. of Receipts.
	£			£		
1872, 1st Half...	1,066,638	62·1	57·00	354,616	68·5	44·14
2nd „	650,119	37·9	76·17	163,238	31·5	94·34*
Year 1872	1,716,757	100·0	64·24	517,854	100·0	59·97
1873, 1st Half...	1,068,292	61·8	56·26	313,297	61·2	53·74
2nd „	659,727	38·2	76·77	199,101	38·8	67·87
Year 1873	1,728,019	100·0	64·10	512,398	100·0	59·23

* Special bridge repairs included.

The special famine traffic interferes somewhat with the comparison in 1874. In addition to the foregoing, labour is cheaper on the eastern side of India, and native coal is available there at a cost on the East Indian main line of little over one-seventh of that of English coal when used on the Bombay lines, a very important advantage in economy of working. The fuel cost on the East Indian railway, in the year 1874, was 1·92*d.* per train mile, and on the Bombay and Baroda Railway, 12·89*d.*, the difference being equal to a saving of something like 345,000*l.* in the year on the working of the former line.

24. The net profit on the railways was 3,978,884*l.*, or 4·31*s.* per train mile. The total, including the net earnings of the Indus steam flotilla and the Eastern Bengal steamers, amounted to 3,993,671*l.*, being an increase of 808,603*l.*, or 25·4

per cent. on the net profit of 1873, the increased railway receipts having been earned at an increased cost of only 20·9 per cent.

The total net earning is equal to an average return of 4·32*l.* per cent. on the capital actually spent upon the Indian lines up to the end of 1874, which compares with 3·65*l.* in 1873, and corresponds almost exactly with that for the United Kingdom in 1874, viz., 4·37*l.*

25. This result is by no means unfavourable, and though on the one hand the famine traffic made a decided addition to the year's business (and for the important aid which the railways furnished in this emergency we cannot be too thankful), on the other, it must not be forgotten that several lines have only been recently opened, and the traffic over them is, of course, only very partially developed. There are large districts still to be opened up, additional communications to be provided, and, it is hoped, that before long the commerce of India will revive, manufactures be introduced more extensively, and the traffic over the existing lines largely increased.

26. The energy and experience of all connected with the working of railways in India will still require to be devoted to affording all reasonable facilities for the traffic of the country, both in passengers and goods, and to securing the utmost economy in railway working, with due regard to safety and efficiency.

27. To recapitulate, I will in conclusion summarise the principal points of interest in the working of the lines at home and those in India for the year 1874, as compared with 1873:—

	Railways in the United Kingdom, 1874. Increase per Cent. on 1873.	Railways in India, 1874. Increase per Cent. on 1873.
Open mileage	2·3	10·00
Capital invested	3·7	5·80
Train miles run	1·6	18·00
Number of passengers (ex season ticket holders)	5·0	9·10
Tons of goods and minerals	(less) 1·3	32·20
Gross receipts	2·6	15·10
Working expenses	6·0	6·06
Net earnings	(less) 1·3	25·40
Average return on capital	(less) 4·7	18·30

Indian Railways.—Comparative Statement of Construction Cost, Open and Train Mileage, the Guaranteed and State Indian

	Railway.	Open Mileage.		Construction Cost.		Train Miles.	
		On 31st Dec., 1874.	Average for the Year.	Capital Spent to 31st Dec., 1874, exclusive of Stores in Hand. [000's omitted.]	Per Mile.	Miles. Number. [000's omitted.]	Number per Open Mile.
	Guaranteed—			£	£		
1	East Indian Railway	1,280	1,280	26,164,	20,441	7,551,	5,900
	East Indian Railway, Jubbulpore line	224	224	3,412,	15,234	584,	2,607
2	Great Indian Peninsula Railway	1,266	1,266	21,703,	17,143	3,925,	3,100
3	Madras Railway	858	858	9,710,	11,817	1,925,	2,244
4	Bombay, Baroda, and Central India Railway	429	424	7,357,	17,337[1]	1,024,	2,415
5	Scinde, Punjaub, and Delhi Railway	663	663	9,665,[2]	14,577	1,586,	2,392
6	South Indian Railway	187	187	1,975,[3]	7,906	324,	1,732
7	Eastern Bengal „	158	158	2,971,[4]	18,804	559,	3,535
8	Oude and Rohilkund Railway	540	524	4,772,	8,837	618,	1,179
	State—						
9	Calcutta and South-Eastern Railway	28	28	731,	26,103	38,	1,373
10	Holkar's „	37	36	684,[5]	18,476	43,	1,202
11	Rajpootana „	292	169	1,880,	6,438	220,	1,302
12	Whardha Valley Railway	18	18	166,	5,880	4,	212
13	Nizam's Railway	121	121	1,083,	8,955	29,	241
14	Nulhuttee „	27	27	30,	1,111	34,	1,261
15	Oomrawuttee „	6	6	44,	7,289	7,	1,230
16	Kamgaun „	8	8	48,	6,066	4,	502
	Totals and averages	6,142[6]	5,997	92,395,	14,975	18,475,[7]	3,081
	Indus steam flotilla	—	—	—	—	—	—
	Totals and averages for the year 1873 (*ex* Flotilla)	5,584	5,494	87,329,	15,539	15,651,	2,849
	Railways in the United Kingdom, 1874	16,449[6]	16,449	Total Capital paid up, 609,896,	37,078	200,484,[7]	12,188

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[1] An allowance has been made in this calculation in respect of the Patree Branch, a portion only of the cost of which was borne by the company. Recent branches of this line have been constructed on the 5 ft. 6 in. gauge with 60 lb. rails, at a cost of little over 4,000*l.* per mile, exclusive of rolling stock.

[2] This includes the cost of the Indus steam flotilla.

[3] 496,798*l.* spent on line under construction. [4] This includes 73,048*l.* spent on steamboats.

[5] This sum probably includes expenditure on the unopened portion of the line, but this is not given separately.

[6] Of the Indian open mileage, 927 miles or 15·1 per cent. are double; while of the United Kingdom mileage, 8,749 miles or 53·2 per cent. are double.

[8] There were 17,420 season ticket holders on the Indian lines, and 493,957 on the railways in the United Kingdom.

Receipts from all sources, Working Charges and Net Earnings per Open and Train Mile of Railways, for the Year 1874.

Passengers Carried.		Merchandise and Minerals conveyed.		Merchandise and Minerals. (Ton Miles.).		Gross Receipts.			
Total Number (exclusive of Season Tickets). [000's omitted.]	Per Open Mile.	Total Tons. [000's omitted.]	Tons per Open Mile.	Ton Miles expressed in the Number of Tons Moved One Mile. [000's omitted.]	Ton Miles per Open Mile.	Amount.	Total per Open Mile.	Total per Train Mile.	
						£	£	s.	
5,792,	4,525	2,138,	1,670	613,934,	479,636	3,187,645	2,490	8·69	1
239,	1,068	177,	791	32,369,	144,504	235,037	1,049	8·11	
3,130,	2,472	853,	674	198,954,	157,152	1,848,548	1,460	9·42	2
2,773,	3,232	371,	432	57,650,	67,191	541,429	631	5·62	3
3,737,	8,814	395,	'931	46,025,	108,551	537,021	1,267	10·49	4
2,112,	3,186	487,	734	79,279,	119,577	605,275	913	7·63	5
1,518,	8,115	122,	654	7,694,	41,144	91,189	488	5·70	6
1,537,	9,731	346,	2,190	42,410,	268,417	326,777	2,068	11·70	7
1,995,	3,807	210,	402	16,744,	31,955	200,401	383	6·49	8
435,	15,543	30,	1,070	682,	24,347	9,948	355	5·19	9
109,	3,041	18,	487	615,	17,073	10,319	286	4·77	10
686,	4,057	117,	692	5,112,	30,248	61,697	365	5·61	11
10,	554	9,	521	177,	9,855	1,927	107	10·09	12
76,	625	5,	40	475,	3,931	10,508	87	7·21	13
70,	2,588	17,	627	449,	16,619	8,511	315	5·02	14
45,	7,495	29,	4,901	176,	29,409	2,786	464	7·55	15
8,	976	26,	3,275	210,	26,199	2,467	308	12·28	16
24,272,	4,047	5,350,	892	1,102,955,	183,918	7,681,485	1,280	8·32	
8,	—	34,	—	—	—	76,975	—	—	
24,280,[3]	—	5,384,	—	—	—	7,758,460			
22,243,	4,049	4,046,	737	866,162,	157,656	6,671,674	1,214	8·52	
477,840,[3]	29,050	188,539,	11,462	—	—	59,255,715	3,602	5·91	

	India.	United Kingdom.
[3] With passenger trains	6,565,844	96,749,953
„ goods and minerals	11,909,478	100,025,939
(The mileage of mixed trains in India is apportioned between passengers and goods)	—	3,708,371 (mixed)
Totals	18,475,322	200,484,263
Percentage apportionment of receipts—		
For passengers	28·2	42
„ goods, &c.	67·9	54
„ miscellaneous	3·9	4
	100·0	100

Working Charges

	•	Maintenance.			Locomotive.			Repairs and Renewals of Carriages and Waggons.			Traffic.
		Amount.	Per Cent. of Gross Receipts.	Per Train Mile.	Amount.	Per Cent. of Gross Receipts.	Per Train Mile.	Amount.	Per Cent. of Gross Receipts.	Per Train Mile.	Amount.
		£		*d.*	£	*d.*	*d.*	£		*d.*	£
Guaranteed.	1	203,420	6·38	6·66	324,804	10·19	10·63	100,853	3·16	3·30	342,496
		16,889	7·19	6·99	36,989	15·74	15·31	12,581	5·35	5·21	21,260
	2	268,513	14·53	16·42	384,760	20·81	23·53	121,074	6·55	7·40	161,523
	3	112,126	20·71	13·97	118,668	21·92	14·79	23,312	4·31	2·90	54,259
	4	49,340	9·19	11·56	98,837	18·41	23·17	29,304	5·46	6·87	42,739
	5	70,792	11·69	10·71	134,646	22·24	20·38	26,187	4·33	3·97	56,269
	6	11,418	12·50	8·40	24,421	26·80	18·10	5,275	5·78	3·90	8,369
	7	39,303	12·02	16·88	35,978	11·01	15·45	20,623	6·31	8·86	39,973
	8	30,407	15·17	11·81	38,554	19·24	14·98	10,132	5·05	3·93	28,390
State.	9	1,794	18·04	11·24	3,359	33·76	21·06	415	4·17	2·60	1,080
	10	1,704	16·52	9·45	2,807	27·19	15·56	513	4·97	2·84	2,063
	11	15,028	24·36	16·40	17,140	27·78	18·71	1,409	2·28	1·54	6,960
	12	512	26·57	32·17	574	29·79	36·07	78	4·05	4·90	495
	13	2,197	20·91	18·09	3,962	37·70	32·62	—	—	—	3,227
	14	1,238	14·55	8·76	1,922	22·58	13·59	622	7·31	4·40	926
	15	361	12·95	11·74	1,185	42·53	38·54	176	6·32	5·72	748
	16	278	11·27	16·61	505	20·47	30·18	78	3·16	4·66	337
		825,320	10·74	10·72	1,229,111	16·00	15·97	352,632	4·59	4·58	771,114
		—	—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—	—
		812,530	12·18	12·46	1,099,810	16·48	16·87	294,103	4·41	4·51	633,606
		6,555,110	11·06	7·85	9,031,037	15·24	10·81	2,558,719	4·32	3·06	9,050,348

* Under the head "Miscellaneous" for India are included the expenses of management,

† The net earning on this line differs from that shown in the company's accounts, but this is returns.

‡ On these two lines the cost exceeded the earnings.

‖ On the Scotch and Irish lines the percentage of working was 56.

The traffic and working for the year 1874 were, no doubt, somewhat exceptional in conse- that railway communication was the chief agency by which the Government was enabled so success- carried over the different lines for the famine-stricken districts, viz.:—616,993 tons by the East 53,370 by the Great Indian Peninsula Railway.

IV.—*Statistics of the Consumption of Sugar, Melada, and Molasses in the United States from* 1860 *to* 1873 *inclusive.*

The following statistics were prepared by the Honourable Alexander Delmar, late Director of the Bureau of Statistics of the United States of America, expressly for the Statistical Society of London:—

and Net Earnings.

Traffic.		Miscellaneous.*			Total Working Cost.			Net Earnings.		
Per Cent. of Gross Receipts.	Per Train Mile.	Amount.	Per Cent. of Gross Receipts.	Per Train Mile.	Amount.	Per Cent. of Gross Receipts.	Per Train Mile.	Amount.	Per Train Mile.	Per Cen on Construction Cost.
	d.	£		*d.*	£		*s.*	£	*s.*	£
10·74	11·21	154,151	4·84	4·90	1,125,724	35·31	3·07	2,061,921	5·62	7·88
9·04	8·80	12,362	5·26	5·08	100,081	42·58	3·45	134,956	4·66	3·96
8·74	9·88	122,711	6·64	7·50	1,058,581	57·27	5·40	789,967†	4·02	3·64
10·02	6·76	41,759	7·71	5·21	350,124	64·67	3·63	191,305	1·99	1·97
7·96	10·02	59,658	11·11	13·98	279,878	52·12	5·47	257,143	5·02	3·50
9·30	8·51	55,785	9·21	8·44	343,679	56·78	4·33	261,596	3·30	2·74
9·18	6·20	5,891	6·46	4·37	55,374	60·72	3·40	35,815	2·30	1·81
12·23	17·17	34,636	10·60	14·88	170,513	52·18	6·10	156,264	5·60	5·65
14·17	11·03	21,599	10·77	8·39	129,082	64·41	4·18	71,319	2·31	1·50
10·85	6·77	1,146	11·52	7·15	7,794	78·34	4·07	2,154	1·12	0·30
19·99	11·44	1,601	15·51	8·88	8,688	84·18	4·01	1,631	0·76	0·24
11·28	7·59	9,161	14·85	9·99	49,698	80·55	4·52	11,999	1·09	0·64
25·68	31·11	363	18·84	22·81	2,022	104·93	10·59	*Dr.* 95‡	0·50	—
30·71	26·57	499	4·75	4·11	9,885	94·07	6·78	623	0·43	0·06
10·88	6·55	1,015	11·93	7·15	5,723	67·24	3·38	2,788	1·64	9·30
26·85	24·32	1,283	46·05	41·72	3,753	134·70	10·17	*Dr.* 967‡	2·62	—
13·66	20·13	804	32·60	48·05	2,002	81·15	9·97	465	2·31	0·96
10·03	10·02	524,424	6·83	6·81	3,702,601	48·20	4·01	3,978,884	4·31	4·31
—	—	—	—	—	73,646	—	—	3,329	—	—
—	—	—	—	—	—	—	—	11,458	—	—
—	—	—	—	—	3,776,247	—	—	3,993,671	—	4·32
9·50	9·72	651,109	9·76	9·98	3,491,158	52·33	4·46	3,185,068§	4·06	3·65
15·27	10·83	5,417,498	9·15	6·48	32,612,712	55·04‖	3·25	26,643,003	2·66	4·37

gency, collection, and delivery of goods, fire insurance, and special funds.
robably owing to some difference of treatment of the special fund contributions in the above

This total includes the flotilla net earning of 4,552*l*.

ence of the famine which occurred in some of the Bengal districts. It is satisfactory to know
lly to mitigate its rigours. The extent of this assistance is shown by the tonnage of food grains
ndian; 170,490 by the Scinde, Punjaub, and Delhi; about 80,000 by the Eastern Bengal; and

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"I. Crop of cane sugar in the United States annually since 1859-60. Mainly from the results of an actual annual survey of the sugar plantations from 1850 to 1861, by P. A. Champonier, and from 1869 to 1873 by L. Boucherau, both of New Orleans.

Crop Year.	Crop of Cane Sugar.	Crop Year.	Crop of Cane Sugar.
	lbs.		lbs.
1859–60	255,115,750	1867–68	41,411,700
'60–61	263,065,000	'68–69	92,681,600
'61–62	505,390,900	'69–70	95,799,000
'62–63	125,000,000	'70–71	159,369,100
'63–64	62,500,000	'71–72	141,307,100
'64–65	7,334,800	'72–73	119,372,000
'65–66	16,500,000	'73–74	98,447,800
'66–67	45,100,000		

"*General Note.*—Various statements of the sugar crop of the United States will be found in books of reference and other publications, but upon close examination they can all be traced to Champonier's and Boucherau's tables and the census. Exceptions are to be made for the years 1862-63 and 1863-64, the statistics for which appear to be more or less conjectural, and to have originated with the *New York Shipping List*. The hogshead has in all cases been reckoned at 1,100 lbs.

"II. Crop of maple sugar in the United States annually since 1859-60, mainly from the census, the reports of the Commissioner of Agriculture and the *New York Shipping List*:—

Crop Year.	Crop of Maple Sugar.	Crop Year.	Crop of Maple Sugar.
	lbs.		lbs.
1859–60	40,120,083	1866–67	49,280,000
'60–61	35,000,000	'67–68	51,520,000
'61–62	30,000,000	'68–69	38,000,000*
'62–63	40,000,000	'69–70	40,000,000
'63–64	50,000,000	'70–71	40,000,000
'64–65	62,720,000	'71–72	40,000,000
'65–66	50,000,000	'72–73	40,000,000

* The census of 1870 returns only 28,443,645 lbs.; but this is erroneous.—*New York Shipping List*, 18th January, 1872.

"III. Clarified sugar produced from cane molasses—imported or domestic—in the United States, annually since 1859-60:—

Crop Year.	Sugar from Molasses. (3 lbs. to 1 gal.)	Crop Year.	Sugar from Molasses. (3 lbs. to 1 gal.)
	lbs.		lbs.
1859–60	25,518,080	1866–67	59,808,000
'60–61	22,021,440	'67–68	71,680,000
'61–62	28,658,560	'68–69	73,920,000
'62–63	47,600,000	'69–70	71,232,000
'63–64	49,999,040	'70–71	56,000,000
'64–65	55,307,840	'71–72	60,000,000
'65–66	44,800,000	'72–73	80,000,000

"IV. Imports for consumption of foreign sugar into the United States. From the United States *Treasury Reports of Commerce and Navigation*:—

Fiscal Year ended 30th January.	Sugar Imported for Consumption.	Duties Received thereon.
	lbs.	$
1860	663,956,468	7,122,925
'61	733,313,931	7,356,610
'62	663,219,392	11,634,458
'63	436,296,185	11,062,311
'64	558,218,098	14,188,572
'65	570,986,852	17,474,212
'66	882,030,128	27,127,346
'67	936,786,294	28,497,998
'68	997,298,331	30,359,883
'69	1,007,625,757	30,645,235
'70	1,183,077,730	35,982,937
'71	1,166,394,288	29,705,501
'72	1,346,942,551	27,887,261
'73	1,378,498,832	28,236,916

"*General Note.*—The years 1860 and 1861 show the net import entries or the import entries less re-exports; the subsequent years show the home consumption, or the combined entries for immediate consumption and withdrawals from warehouse. The reason for the difference is that no consumption account of sugar exists prior to the fiscal year 1862. The duties received in 1860 and 1861 are calculated at the rate of 24 per cent. on the average value per pound of all entries of sugar, which in the former year is assumed to have been 0·0447 dollars, and in the latter 0·0418, these being the results shown in the *Commerce and Navigation Reports* of those years. The duties received in subsequent years are the actual sums returned by the collectors. To the imports of 1862, as returned in the consumption account 10,000,000 lbs. of sugar and $72,000 in duties have been added for the following reason:—

"Some entries and withdrawals of sugar were made in 1862, under the tariff of 1857, at 24 per cent. *ad valorem.* Of these entries the published accounts of the Treasury make no mention; but a careful investigation of the scattered and disordered MSS. returns on file in the archives of the register of the treasury, which was made by order of the director of statistics in 1867, disclosed the following entries of sugar under the tariff of 1857:—New York, July, 1861, sugar, value, $185,099; August, $1,016; September, $11,075; October, *none;* November, $13,381; December and January, 1862, *none;* March, 1862, $14. The returns from New York of the other months of the fiscal year, 1861-62 could not be found. Boston, July, 1861, $25,982; Philadelphia, July, 1861, *none.* No other returns from these ports were found. Total values found, $236,567; equivalent to, say, 8,000,000 lbs. of sugars. With due allowance for missing returns, it appeared that 10,000,000 lbs., valued at $300,000, was a fair estimate of the total amount of sugars entered during the fiscal year 1861-62 under the 24 per cent. rate established by the Act of 1857.

"V. Imports for consumption of foreign melada into the United States. From the United States *Treasury Reports of Commerce and Navigation:*—

Fiscal Year, ended 30th June.	Melada Imported for Consumption.	Duties Received thereon.	Melada Reduced to Sugar at 40 per Cent. Discount.
	lbs.	$	lbs.
1860	86,352	1,341	51,811
'61	None	Nil	None
'62	8,690,656	83,011	5,214,394
'63	2,794,764	56,233	1,676,858
'64	5,633,115	112,662	3,379,868
'65	6,749,889	168,747	4,049,934
'66	7,424,865	185,622	4,479,919
'67	2,899,768	72,494	1,739,861
'68	3,542,817	88,570	2,125,690
'69	11,146,867	278,672	6,688,120
'70	33,307,758	832,694	19,984,656
'71	65,442,264	1,062,360	39,265,358
'72	65,911,871	988,842	39,547,123
'73	107,084,690	1,606,270	64,250,814

"VI. Total net consumption of domestic and foreign cane molasses, and domestic maple and sorghum syrup, in the United States, annually since 1860, and the same reduced to sugar, at the rate of 3 lbs. of the latter to a gallon of the former. This table is formed by adding together—1. The product of domestic cane molasses; 2. The imports for consumption of foreign cane molasses; 3. The product of domestic maple syrup; and 4. The product of domestic sorghum syrup, and by subtracting from the sum thereof—1. The quantities of cane molasses converted into clarified sugar as shown in Table 3; and 2. The exports of domestic molasses.

Year.	Net Consumption of Molasses and Syrup.	The Same Reduced to Sugar.
	Galls.	lbs.
1859–60	47,360,008	142,080,024
'60–61	44,307,343	132,992,029
'61–62	71,466,899	214,400,697
'62–63	43,087,957	129,263,871
'63–64	39,818,098	119,454,294
'64–65	51,473,504	154,420,512
'65–66	70,094,582	210,283,746
'66–67	72,620,973	217,862,919
'67–68	68,570,184	205,710,552
'68–69	73,201,257	219,603,771
'69–70	63,324,595	189,973,785
'70–71	64,698,526	194,095,578
'71–72	58,031,066	174,093,198
'72–73	44,389,911	133,169,733

"VII. Exports of domestic sugar from the United States, annually since 1859-60. From the United States *Treasury Reports of Commerce and Navigation*:—

Fiscal Year ended 30th June.	Brown Sugar.	Refined Sugar.	Total.
	lbs.	lbs.	lbs.
1860	1,133,986	3,332,045	4,466,031
'61	3,275,024	3,236,110	6,511,134
'62	1,284,849	1,470,403	2,755,252
'63	380,348	3,214,661	3,595,009
'64	525,151	1,803,332	2,328,483
'65	116,240	1,309,522	1,425,762
'66	469,661	3,990,477	4,460,138
'67	294,907	7,835,268	8,130,175
'68	3,943	2,214,207	2,218,150
'69	16,357	3,151,166	3,167,523
'70	12,476	4,415,100	4,427,576
'71	43,800	3,797,278	3,841,076
'72	17,065	4,461,427	4,478,492
'73	212,625	9,870,738	10,083,363

" *General Note.*—During the war, from 1861 to 1865, the returns of all exports from the southern ports are either entirely wanting or very defective, but it is believed that little or no sugar was included.

" VIII. Population of the United States having access to the supplies of sugar shown in Tables 1 to 6.

Year.	Population.	Year.	Population.
1860	31,400,000	1867	36,000,000
'61	32,400,000	'68	36,800,000
'62	33,000,000	'69	37,700,000
'63	24,000,000	'70	38,600,000
'64	24,900,000	'71	39,700,000
'65	27,700,000	'72	40,900,000
'66	35,300,000	'73	42,100,000

" *General Note.*—The figure for 1860 is that of the total number of the people in that year as shown by the census. The figures for 1861 and 1862 are the same, with the then normal annual increment added. Although the civil war which commenced in 1861, shut out the South from the supplies of imported sugar, yet the stock on hand in the South, of domestic sugar, lasted until 1863.—*New York Chamber of Commerce Sugar Report* and *Rep. Rev. Com.*, 1865-66 p. 138, foot note.

" The figures for 1863, 1864, and 1865, show the total population within the United States army lines. The Com. of Int. Rev., in his report for 1863, p. 232, estimates the population actually subject to the payment of internal revenue dues on 30th June, 1863, at 24,113,438. In the estimates for the two following years, the gradual widening of the United States army lines on the one hand, and the deaths from a state of warfare on the other, are both allowed for. The figure for 1866 is that of the whole population after the close of the war. This was approximately established by censuses taken under the direction of Mr. Delmar, by means of the internal revenue officers in 1867 and 1868. The figures for subsequent years are estimated with reference to these and the results of the census of 1870.

"IX. Total net consumption and consumption per capita of domestic and foreign sugar, melada, and molasses of all kinds in the United States annually since 1860. This table is formed by adding together the quantities shown by Tables 1, 2, 3, 4, 5, and 6, from the sum thereof subtracting the exported quantities shown in Table 7, and dividing the remainder by the numbers of population shown in Table 8:—

Year.	Net Consumption of all Saccharine Matter.	Net Consumption per Capita of Population.	
	lbs.	lbs.	
1859–60	1,174,135,000	37·4	
'60–61	1,179,881,000	36·4	av. 37·5
'61–62	1,444,129,000	43·8	
'62–63	776,242,000	32·3	
'63–64	841,223,000	33·4	
'64–65	853,394,000	30·8	
'65–66	1,203,634,000	34·1	
'66–67	1,302,447,000	36·2	
'67–68	1,367,528,000	37·2	
'68–69	1,435,352,000	38·1	
'69–70	1,595,640,000	41·4	
'70–71	1,651,283,000	41·6	
'71–72	1,797,412,000	43·9	
'72–73	1,805,208,000	42·9	

"*General Note.*—Beside the quantities of saccharine matter shown in the above table of totals, there have been imported for consumption in the United States small quantities of glucose, or grape sugar, and produced in some of the Western States, notably in California, other small quantities of beetroot sugar. Although the present product of the latter is reckoned at so much as 5,000,000 lbs. per annum, it has not been considered worth while to incorporate it in the tables. The consumption of the years 1860-61, 1861-62, and 1862-63, should be averaged together on account of the heavy stocks of domestic sugar from 1860-61 that were carried through the two subsequent years. Reckoned in this way the average consumption of the three years would be 37½ lbs. per capita per annum."

V.—*The Commerce of Spain.*

The series of reports by the Secretaries of Legation and the Consuls show that the great resources of Spain are scarcely impaired by the civil war, and they prove likewise that the operation of the reformed tariff has been incontestably good. At the present moment there appears to be a strong tendency in Spain to return, as far as possible, to the policy of protection, and the statements made by Mr. Phipps, Secretary of Legation at Madrid, will be opportune, as showing, in spite of exceptional circumstances, that the modifications introduced in 1869 in the sense of free trade has been attended with favourable results. In that year the prohibition of the importation of many foreign manufactures was removed, while others which, for the protection of native manufactures, were taxed at a rate of 50 and 60 per cent. *ad valorem*, were admitted at a rate of 35 and 30 per cent. The importation of raw materials was almost rendered free, and foreign corn, which was formerly refused admission, was admitted at a low rate of duty.

The following are the statistics of the general commerce of Spain since 1849, when the first modification of the protective duties was introduced:—

	Imports.	Exports.	Total.
	£	£	£
1849............	5,870,000	4,780,000	10,650,000
'50............	6,720,000	4,890,000	11,610,000
'60............	14,830,000	10,980,000	25,810,000
'70............	20,872,872	15,981,971	36,854,843
'71............	14,354,168	15,195,612	29,549,780
'72............	12,703,740	18,695,479	31,399,219
'73............	12,472,402	22,566,126	35,038,528
'74............	15,280,000	16,123,000	31,403,000

If a comparison is made between the years 1849 and 1873, it will be found that the value of the exportation of wine increased 600 per cent., lead 450, olive oil 700, raisins nearly 400, flour nearly 700, cork 700, brandy 300, salt 350, sulphur 500; the whole value of exports having increased 500 per cent. The importation increased during the same period a little over 200 per cent. Independent of the natural increase to be anticipated in a period of twenty-five years, the impetus given to Spanish commerce may be accounted for by the effects produced by the suppression of the tithes and seigneurial rights, the alienation of civil and church property, the tariff reforms, and the construction of railways, bridges, and high roads; while these advantageous circumstances have been modified by the constant civil wars and the excessive bad harvests owing to drought.

It is to be regretted that at the present time no detailed statistics are available with regard to Spanish commerce during the year 1874, and that the last volume of general statistics, though bearing the date of 1875, only applies to Spanish commerce during the year 1871. This year, however, possesses considerable interest as illustrating the effects of the second revision of the tariff which took place in 1869.

The country which holds the first place in Spanish commercial relations is Great Britain, and the total value of the commercial movement with Spain amounted, in 1871, to 15,352,037*l*., exclusive of the direct commerce with Gibraltar and the British Colonies. Of this amount, 7,095,403*l*. is credited to exports, and 8,258,600*l*. to imports. The principal articles of export to Great Britain were wines to the value of 3,272,000*l*., metals (principally lead), mineral ore, dried fruits, esparto grass, fresh fruits, cork, cattle, and oil; whilst Spain in return received yarn, coal, metals, railway materials, woollens, linens, cottons, silk, &c., &c. France takes the next place on the list, and the total commerce with that country amounted, in 1871, to 8,301,054*l*.; the imports amounting to 5,167,211*l*. and the exports to 3,133,843*l*. The principal articles imported from France were corn and grain, woollen and other soft mixed textiles, raw cotton, silken tissues, flaxen and hempen yarn, iron and steel, manufactured, raw silk, fine wool, cottons, dyes, refined sugar, machinery, jewellery, articles de Paris, &c. The exports to France were metals, cork, grain, wine of a common quality, wool, silk, cattle, manganese ore, green and dried fruits. The value of the commerce with the United States, which stands third on the list, is only one quarter that of France, and amounted in 1871 to 3,581,682*l.*; imports, consisting principally of raw cotton, to the value of 2,000,000*l.*; petroleum and tobacco amounting to 2,642,898*l.*; and exports, mainly dried fruits and lead, to 938,783*l.* The imports from Portugal attained a value of 602,757*l.*; exports of 836,672*l.*; the value of the total commerce being estimated at 1,439,429*l.* The commerce with Sweden and Norway amounted to 772,884*l.*; exports 83,340*l.*, imports 689,544*l.* The latter are confined almost exclusively to "bacalao" (salt fish), valued at 371,050*l.*, and timber. The commerce with Italy was 417,054*l.*; imports 327,459*l.*, exports 89,545*l.* Italy exports corn, sulphur, charcoal, hemp, and marble, and imports from Spain, lead, common wine, and sardines. Spanish trade with Belgium amounts to 532,965*l.* (nearly double the amount in 1870), the imports being 420,318*l.* and the exports 112,647*l.* The principal imports were flaxen and hemp tissues, manufactured iron and steel, paper, tobacco, cheese, machinery, candles. Belgium imports from Spain mineral ore, sherry, metals, esparto grass. Very important commercial relations also exist with Turkey, Russia, Algiers, Gibraltar, Brazil, and the Spanish republics of South America. A comparison between the trade of the years 1870 and 1871 shows that in the latter year the trade with Belgium and Portugal was double, that with Great Britain increased about 30 per cent., with Sweden and Norway about 25, with the United States about 15; while that with Italy showed little alteration, and that with France decreased nearly 25 per cent., doubtless owing to the effects of the war.

The article of Spanish exportation which has increased most considerably during late years, and which holds the first place in the list, is wine, and owing to the great development of the wine trade with Great Britain, it deserves special notice. Public attention has been recently called most especially in Spain to the unfavourable treatment of Spanish wines in certain foreign countries, and the principal complaints are directed against Great Britain, France, Portugal, and Venezuela. The inferior classes of Spanish wines, such as those of Jerez and Puerto Santa Maria, command from their unrivalled quality a secure position in foreign markets, but the cheaper classes, such as those of Catalonia, experience a formidable competition on the part of French wines, which contain a far smaller proportion of alcohol, and in spite of the approval which these wines have met with when samples were produced at the Exhibitions in London and Vienna, it is bitterly complained that under the existing tariffs they have little or no chance of a favourable sale. With regard to Great Britain these complaints are sufficiently refuted by the fact that the duty of 2*s.* 6*d.* per gallon is so far from prohibiting that, in 1859, the year preceding the adoption in the British tariff of the principle on which the wine duties are based, Spain and Portugal, the countries most affected, imported into the United Kingdom wine to the extent of 3,629,325 gallons, and 1,797,854 gallons respectively; whereas, in 1873, 9,489,531 gallons were imported from Spain, and 4,097,733 from Portugal. This increase is totally independent of the natural increase in the value ot the general exportation of Spanish wines, which rose only from 3,000,000*l.* in 1859, to 7,000,000*l.* in 1873. The principle of the English duties is to admit natural wines, produced by the distillation of the grape, at a very low duty; but when extraneous spirit is added to such wine, duty is chargeable for the spirit in addition to the duty payable on the wine. Spanish wine producers would therefore probably find it more to their interest to turn their efforts, as has been often suggested, to the preparation of their wines for the foreign markets at an inferior strength, than to rely on the shortsighted hope of persuading those in power in their own country to establish a retaliating tariff for their advantage.

The mining industry is another of the largest sources of Spanish wealth, and the figures furnished by Mr. Phipps, from official and semi-official documents, are worthy of reproduction. Of the forty-nine provinces of Spain, forty-six are mineral, and are, in the order of importance, Almeria, Murcia, Oviedo, Jaen, Granada, Huelva, Santander, Ciudad Real, Cordova, Teruel, Biscay, Badajoz, &c. The mineral exportation from Spain has increased as follows:—

	Exports in 1853.	Exports in 1873.
	£	£
Metals and mineral ore....	280,643	3,231,761
Common salt	69,048	343,844
Lead in bars	803,589	1,571,992
	1,153,280	5,147,569

Note.—Difference in twenty years, 3,994,316*l.*

The following was the number of mines at the close of 1871:—

Iron	678	Lead and zinc	54
Pit coal	637	Tin	26
Copper	445	Quicksilver	45
Zinc	342	Antimony	32
Argentiferous lead	398	Cobalt	11
Manganese	347	Sulphate of soda	43
Lignite	228	Sulphur	63
Silver	105	Asphalte	10
Common salt	96	Gold	14

The number of operatives employed therein was 43,498, and the production in the same year is stated as follows:—

	Metric Quintals.		Metric Quintals.
Iron	5,867,625	Argentiferous copper	4,913
Lead	4,027,893	Pyrites	5,400
Copper	4,982,061	Quicksilver	210,246
Zinc	1,073,802	Manganese	152,687
Pit coal	5,897,076	Salt	382,334
Silver	132,653	Lignite	438,244
Argentiferous lead	267,866		

According to the consuls' reports, the business of several of the most important places has rather augmented than otherwise. At Valencia the production and exportation of oranges increases enormously, affording remunerative employment to British vessels, especially the numerous steamers homeward bound from other ports of the Mediterranean. At Alicante and Barcelona the same tendency is visible. At Malaga an unusual stimulus had been given to the import trade by illicit contraband transactions, which were rendered comparatively easy and safe. The chief business done is in exports, the importance of which is due to the large quantities of muscatel raisins, almonds, figs, and other fruits grown in the locality.

The population of the city, which is reckoned at about 110,000 souls, is steadily increasing. The whole tenor of the information supplied by these returns confirms the impression of the natural riches of Spain, whose great misfortune consists in the insecurity to life and property arising from the unsettled state of political affairs.

VI.—*Some Statistical Items relating to the Graduates and Present Members of Amherst College, Massachusetts, United States of America, July,* 1875.

The number of graduates is 2,172; of these, there have died 512; their average age at death was (in years) 41·330; the number of names on the Annual Catalogue from 1861-62 to 1874-75 inclusive is 3,488. During this period the sick list, or those who have been kept from all college exercises two or more consecutive days for disability is about one-fifth, or 709.

The most prevalent causes to produce these interruptions to college duties have been—

	Per Cent.
Colds and pneumonia	33·208
Physical injury	9·022
Boils	5·401
Typhoid fever	5·276
General inability	4·010
Mumps	3·384
Common fever	3·008
Diptheria	2·506
Indigestion, &c.	2·756
Weak eyes	2·756
Sore throat	2·756
Bilious fever	2·630
,, attacks	2·130
Intermittent fever	1·652
Measles, diarrhœa, and teeth	1·529
Meningitis	1·273
Dysentery	1·002

The amount of time lost, if averaged to each sick man during this period, is 11·390 days; if averaged to all college is 2·428 days.

Of the 3,488 students connected with college during the past fourteen years—

			Per Cent.
The proportion of	Seniors	has been	21·366
,,	Juniors	,,	23·154
,,	Sophomores	,,	26·867
,,	Freshmen	,,	28·710

The 709 who have made up the sick list during the same time have belonged to classes as follows:—

	Per Cent.
Seniors	16·320
Juniors	23·272
Sophomores	27·875
Freshmen	33·722

The rate of decrease in numbers between the freshman and sophomore classes is 6 per cent., and the decrease in sickness 15 per cent.; and between the sophomore and juniors the *numerical decrease* is 14 per cent., and the *sickness decrease* 17 per cent. The *falling off in numbers* of junior to senior year is 8 per cent., while the *sickness decreases* to the amount of 30 per cent. These items are shown in the tabulated form below:—

Classes.	Relative Numbers in Classes.	Percentage of Decrease.	Relative Sickness of Classes.	Percentage of Decrease.
Freshman	1·343	—	2·017	—
Sophomore	1·257	6·00	1·719	15·00
Junior	1·084	14·00	1·435	17·00
Senior	1·000	8·00	1·000	30·00

Some of the Anatomical and Physiological "Constants" of a Student of Amherst College, U.S.A., 1875. Determined by 4,311 observations recorded during the past thirteen years, with the relative percentage of the different classes, the freshmen as the unit of comparison.

	Age in Years.	Relative per Cent.	Weight in Pounds.	Relative per Cent.	Height in Feet.	Relative per Cent.	Chest Girth in Inches.	Relative per Cent.
Seniors	22·403	1·164	142·239	1·067	5·681	1·016	35·755	1·014
Juniors	21·941	1·140	141·552	1·062	5·682	1·016	36·006	1·022
Sophomores.	20·700	1·075	138·395	1·038	5·663	1·013	36·107	1·025
Freshmen	19·248	1·000	133·331	1·000	5·590	1·000	35·236	1·000
All	21·073	1·095	138·879	1·042	5·654	1·011	35·776	1·015

	Arm Measure in Inches.	Relative per Cent.	Fore-arm Measure in Inches.	Relative per Cent.	Utmost Lung Capacity in Cubic Inches.	Relative per Cent.	Test of Strength	Relative per Cent.	Relative Class Per-centage.
Seniors	11·716	1·033	11·141	1·020	259·610	1·093	11·427	1·201	1·076
Juniors	11·676	1·029	11·060	1·013	254·341	1·071	11·411	1·200	1·069
Sophomores .	11·638	1·025	11·062	1·013	256·222	1·099	10·700	1·125	1·051
Freshmen	11·351	1·000	10·920	1·000	237·445	1·000	9·512	1·000	1·000
All	11·595	1·021	11·045	1·011	251·904	1·061	10·512	1·105	1·049

VII.—*Some Early Statistics of France.*

Extract from the Paris letter of the 17th October in the *Pall Mall Gazette*:—

"M. Maurice Block has now published a second edition of his 'Statistics of France compared with different Countries in Europe,' entirely recast and enlarged. We learn from this work that it was only in 1830 that really valuable statistical tables were commenced, and these were printed only in 1840. M. Paul Botteau, writing on this subject, says:—'It is impossible to find any data for estimating the wealth of France. To form an idea on this matter we must refer to the calculations of an Englishman, Davenant, as a century later it was an Englishman, Arthur Young, who gave us the best information with regard to our agricultural situation.' It is interesting also to observe that England was the indirect cause of the establishment of official statistics on the occasion of the peace of Utrecht. The signing of the treaty of peace was accompanied by the signing of a treaty of commerce, and for this it was necessary to discuss tariffs and to supervise exports and imports. Out of the Treaty of Utrecht sprang the 'Bureau de la balance du Commerce.' The *Almanach Royal* shows us the extent to which statistics went in the reign of Louis XIV, when it published the following information:—'The kingdom contains 600 rivers. There are 6,000,000 men with wives and children, 400 large towns, and 25,000 small ones. There are 132,000 parishes and 3,500,000 families. There are 14,000 families of the old nobility. There are 700,000 men (the present strength of the active army) under arms, paid by the king. There are 70 line-of-battle ships and a great number of small vessels on the ocean. There are 10 galleys in the Mediterranean. The king has a revenue of 180,000,000 pounds (francs). There are 18 metropolitan archbishoprics and 109 bishoprics. There are 140,000 livings, 1,350 abbeys, 12,400 priories, and 150 commanderies of Malta; there are 20,000 canons, 6,000 choristers; there are 35,600 paid monks, and 213,500 belonging to the mendicant orders; there are 21,000 monks of St. François, Recollets and Picpus, 9,500 Carmelites, Augustins, and Jacobins, 2,5000 Minimes, 500 hermits, 82,000 nuns. The ecclesiastics possess 900 places and chateaux, having *haute et basse justice,* and 25,000 farms; also a revenue of 312,000,000 frs."

VIII.—*Progress of South Australia.*

The following interesting return recently received, dated the 20th September, 1875, issued from the "Chief Secretary's Office, Adelaide," showing the progress of South Australia during the past five years, has been compiled by Mr. Josiah Boothby, the Government Statist of that colony, an Honorary Member of the Statistical Society:—

Period.	Population.	Lands.				Revenue.		
		Total Sold.		Cultivated.				
		Acres.	pr. head.	Acres.	pr. head.		pr. head.	
			A.		A.	£	£	s.
Year 1869........	181,146	3,952,188	22	850,576	5	777,351	4	6
,, '74........	204,623	5,712,773	28	1,330,484	7	1,003,819	4	18
Increase	23,477	1,760,585	6	479,908	2	226,468	–	12
,, pr. cnt.	13	45	—	56	—	29	—	

Period.	Population.	Proportion of Revenue Raised by Taxation. Customs.			Public Debt.			Imports.		
			pr. head.			pr. head.			pr. head.	
		£	£	s.	£	£	s.	£	£	s.
Year 1869........	181,146	223,452	1	5	1,783,700	9	17	2,754,770	15	4
„ '74........	204,623	370,439	1	16	2,389,750	11	13	3,983,290	19	9
Increase	23,477	146,987	-	11	606,050	1	16	1,228,520	4	5
„ pr. cnt.	13	66	—		34	—		45	—	

Period.	Population.	Exports.			Total Value of Import and Export Trade.			Tonnage of Ships Inwards and Outwards.	Railways.
			pr head.			pr. head.			
		£	£	s.	£	£	s.	Tons.	Miles.
Year 1869........	181,146	2,993,035	16	10	5,747,805	31	14	333,507	166
„ '74........	204,623	4,402,855	21	10	8,386,145	40	19	534,550	369
Increase	23,477	1,409,820	5	-	2,638,340	9	5	201,043	203
„ pr. cnt.	13	48	—		47	—		60	122

Period.	Population.	Main Roads.	Telegraphs.	Horses.	Cattle.	Sheep.
		Miles.	Miles.	No.	No.	No.
Year 1869........	181,146	597	1,113	73,828	119,697	4,436,955
„ '74........	204,623	874	5,100	93,122	185,342	6,120,211
Increase	23,477	277	3,987	19,294	65,645	1,683,256
„ pr. cnt.	13	46	359	26	55	38

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED JUNE, 1875.

BIRTHS AND DEATHS—QUARTER ENDED SEPTEMBER, 1875.

A.—*Serial Table of* MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1875-69, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1875-69:—*Numbers.*

Years.........	'75.	'74.	'73.	'72.	'71.	'70.	'69.
Marriages No.	—	201,605	205,615	201,267	190,112	181,655	176,970
Births........ ,,	—	854,307	829,778	825,907	797,428	792,787	773,381
Deaths .... ,,	—	526,701	492,520	492,265	514,879	515,329	494,828

QUARTERS *of each Calendar Year*, 1875-69.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	42,237	41,417	41,217	40,539	36,305	36,455	37,752
June .... ,,	48,360	52,737	53,408	50,380	48,831	46,720	43,202
September ,,	—	49,014	49,709	49,818	46,536	43,900	43,978
December ,,	—	58,437	61,281	60,530	58,440	54,580	52,038

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	215,251	214,437	215,744	208,752	209,523	206,366	203,775
June .... ,,	214,650	217,605	206,516	208,790	201,165	203,615	188,618
September ,,	210,781	209,898	204,167	201,746	193,271	192,521	190,894
December ,,	—	212,367	203,351	206,619	193,469	190,285	190,594

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'75.	'74.	'73.	'72.	'71.	'70.	'69.
March........ No.	162,514	136,528	132,432	134,952	138,393	143,773	133,096
June .... ,,	130,797	123,990	118,582	120,835	120,793	121,128	118,947
September ,,	121,459	124,099	114,676	118,927	121,332	124,297	114,644
December ,,	—	142,084	126,830	117,551	134,361	126,131	128,141

Annual Rates of MARRIAGES, BIRTHS, *and* DEATHS, *per* 1,000 PERSONS LIVING *in the Years* 1875-69, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1875-69:—*General Ratios.*

YEARS............	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
Estmtd. Popln. of England *in thousands* in middle of each Year....	23,944,	—	23,649,	23,356,	23,068,	22,783,	22,501,	22,223,
Persons Married	—	16·9	17·1	17·6	17·5	16·7	16·1	15·9
Births	—	35·4	36·1	35·5	35·8	35·0	35·2	34·8
Deaths................	—	22·3	22·3	21·1	21·3	22·6	22·9	22·3

QUARTERS *of each Calendar Year,* 1875-69.

(I.) PERSONS MARRIED :—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74	'74.	'73.	'72.	'71.	'70.	'69.
March	14·3	13·8	14·2	14·3	14·1	12·9	13·2	13·8
June....................	16·2	17·2	17·9	18·3	17·5	17·2	16·7	15·6
September	—	16·4	16·4	16·9	17·1	16·2	15·5	15·7
December	—	20·0	19·6	20·8	20·8	20·4	19·2	18·6

(II.) BIRTHS:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	36·5	37·0	36·8	37·5	36·3	37·3	37·3	37·3
June....................	36·0	36·2	36·9	35·5	36·3	35·5	36·4	34·1
September	34·9	34·4	35·2	34·7	34·7	33·7	34·0	34·1
December	—	34·4	35·6	34·5	35·5	33·7	33·6	34·1

(III.) DEATHS:—*Ratio per* 1,000.

Qrs. ended last day of	'75.	Mean '65–74.	'74.	'73.	'72.	'71.	'70.	'69.
March	27·5	24·5	23·4	23·0	23·5	24·7	26·0	24·4
June....................	21·9	21·4	21·0	20·4	21·0	21·3	21·6	21·5
September	20·1	21·1	20·8	19·5	20·5	21·1	22·0	20·5
December	—	22·2	23·8	21·5	20·2	23·4	22·3	22·9

B.—*Comparative Table of* CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE *in each of the Nine* QUARTERS *ended September,* 1875.

1	2	3	4		5	6	7	8	9	10	
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Discount.	Average Price of Wheat per Quarter in England and Wales.		Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcase), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Sea-borne Coal in London Market per Ton.	
					Beef.	Mutton.		In-door.	Out-door.		
	£		*s.*	*d.*	*d. d. d.*	*d. d. d.*	*s. s. s.*			*s.*	*d.*
1873 Sept. 30	92⅝	3·8	61	4	5¾—8¾ 7¼	6½—9¼ 7⅞	95—120 107	127,672	632,417	30	1
Dec. 31	92⅝	6·3	61	1	5—8½ 6¾	5¾—8½ 7⅛	96—117 107	137,409	625,316	30	8
1874 Mar. 31	92	3·6	62	2	5¼—8¼ 6¾	5½—8¼ 6⅞	112—127 119	146,082	641,910	23	5
June 30	93	3·4	61	1	5—8 6½	5—8¼ 6⅝	135—165 150	133,844	614,641	23	7
Sept. 30	92⅛	3·0	55	5	5¼—8 6⅝	5¼—7¾ 6½	75—104 90	129,993	592,989	23	3
Dec. 31	93	4·7	44	4	4⅞—8¼ 6½	4¾—8 6¼	73—96 84	138,868	587,772	24	7
1875 Mar. 31	92⅝	3·7	42	6	5—8 6½	4¾—8 6½	81—111 96	146,708	622,652	22	5
June 30	93⅝	3·5	42	6	5¼—8¼ 6¾	5½—9½ 7½	80—120 100	131,717	592,362	20	8
Sept. 30	94⅛	2·4	49	0	5½—8½ 7	5½—9½ 7½	70—93 82	125,578	555,598	20	4

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to* 1,000 *of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-70.	1874. Quarters ending			1875. Quarters ending		
		June.	Sept.	Dec.	March.	June.	Sept.
England and Wales	22·4	21·0	20·8	23·8	27·5	21·9	20·1
I. London	24·3	19·9	20·6	26·2	27·2	21·9	21·5
II. South-Eastern counties	19·1	17·1	15·9	17·5	23·3	18·6	16·1
III. South Midland ,, ...	20·2	17·5	17·0	19·5	26·2	19·8	17·7
IV. Eastern counties	20·1	18·8	16·7	19·2	24·6	20·2	17·9
V. South-Western counties	19·9	18·8	16·6	18·8	26·0	20·1	15·9
VI. West Midland ,, ...	21·8	20·4	20·2	22·9	28·3	21·7	19·1
VII. North Midland ,, ...	20·8	19·6	20·6	23·3	27·3	21·8	21·2
VIII. North-Western ,, ...	26·3	25·7	26·5	29·6	31·4	24·6	23·3
IX. Yorkshire	24·0	22·5	23·8	27·6	28·1	23·7	22·9
X. Northern counties	22·7	24·2	25·2	26·7	27·3	22·3	23·7
XI. Monmouthshire and Wales	21·6	23·7	20·0	22·8	28·6	23·4	18·1

D.—*Special Average Death-Rate Table:*—ANNUAL RATE *of* MORTALITY *per* 1,000 *in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1875-73.

	Area in Statute Acres.	Population Enumerated.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
		1871.		1875.	Mean '65-74.	1874.	1873.
In 131 Districts, and 59 Sub-districts, comprising the *Chief Towns*	3,183,965	12,892,982	March ..	28·9	26·6	25·2	24·4
			June	22·7	22·9	22·5	21·6
			Sept.	22·3	23·9	23·5	22·1
			Dec.	—	24·8	26·7	24·3
			Year	—	24·6	24·5	23·1
			Year	—	19·3	19·3	18·4
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,185,256	9,819,284	March ..	25·7	22·0	20·9	21·1
			June ...	20·8	19·4	19·1	18·7
			Sept.	17·2	17·3	17·2	15·9
			Dec.	—	18·6	19·9	17·9

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table:*—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE *and* RAINFALL *in the Third Quarter of* 1875, *in* TWENTY-ONE *Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1875.	Births in 13 Weeks ending 2nd Oct., 1875.	Deaths in 13 Weeks ending 2nd Oct., 1875.	Annual Rate to 1,000 Living during the 13 Weeks ending 2nd Oct., 1875.		Mean Temperature in 13 Weeks ending 2nd Oct., 1875.	Rainfall in Inches in 13 Weeks ending 2nd Oct., 1875.
				Births.	Deaths.		
Total of 21 towns in U. K.	7,742,889	69,828	45,723	36·2	23·7	58·6	11·03
London	3,445,160	29,697	18,469	34·6	21·5	60·5	9·79
Portsmouth........................	122,632	1,003	586	32·8	19·2	—	—
Norwich	82,842	650	473	31·5	22·9	59·5	8·80
Bristol........................	196,186	1,744	1,171	35·7	24·0	58·6	10·24
Wolverhampton........................	71,718	669	406	37·4	22·7	58·2	14·14
Birmingham	366,325	3,588	2,287	39·3	25·1	58·9	13·39
Leicester........................	109,830	1,029	856	37·6	31·3	59·0	10·59
Nottingham	92,251	743	617	32·3	26·8	58·9	11·59
Liverpool........................	516,063	4,783	3,330	37·2	25·9	57·9	10·33
Manchester........................	356,626	3,536	2,402	39·8	27·0	59·4	14·53
Salford........................	135,720	1,689	1,095	50·0	32·4	57·8	14·17
Oldham	87,437	884	545	40·6	25·0	—	—
Bradford........................	168,305	1,612	1,132	38·4	27·0	58·0	8·41
Leeds	285,118	2,910	1,973	41·0	27·8	58·5	7·62
Sheffield	267,881	2,681	1,670	40·2	25·0	58·1	11·82
Hull........................	133,932	1,332	1,004	39·9	30·1	57·6	10·55
Sunderland........................	106,342	1,101	589	41·6	22·2	59·2	9·64
Newcastle-on-Tyne	137,665	1,386	992	40·4	28·9	—	12·95
Edinburgh	211,626	1,624	1,105	30·8	21·0	—	—
Glasgow	534,564	4,921	3,316	36·9	24·9	56·8	11·41
Dublin........................	314,666	2,246	1,705	28·6	21·7	58·9	8·56

F.—*Divisional Table:*—MARRIAGES *Registered in Quarters ended* 30*th June,* 1875-73; *and* BIRTHS *and* DEATHS *in Quarters ended* 30*th September,* 1875-73.

1 DIVISIONS. (England and Wales.)	2 AREA* in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 MARRIAGES in Quarters ended 30th June. 1875.	5 1874.	6 1873.
ENGLD. & WALES....*Totals*	37,319,221	No. 22,712,266	No. 48,360	No. 52,737	No. 53,332
I. London	75,362	3,254,260	8,166	8,676	8,770
II. South-Eastern	3,994,431	2,167,726	3,812	4,086	4,015
III. South Midland	3,201,325	1,442,654	2,121	2,343	2,525
IV. Eastern	3,211,441	1,218,728	1,712	1,850	1,910
V. South-Western	4,981,170	1,880,777	3,191	3,673	3,625
VI. West Midland	3,945,460	2,720,669	5,672	6,072	6,527
VII. North Midland	3,535,445	1,406,935	3,244	3,825	3,797
VIII. North-Western	1,998,914	3,389,044	8,475	8,946	8,839
IX. Yorkshire	3,702,384	2,395,569	5,569	5,966	6,096
X. Northern	3,547,947	1,414,234	3,514	3,955	4,024
XI. Monmthsh. & Wales	5,125,342	1,421,670	2,884	3,345	3,204

7 DIVISIONS. (England and Wales.)	8 BIRTHS in Quarters ended 30th September. 1875.	9 1874.	10 1873.	11 DEATHS in Quarters ended 30th September. 1875.	12 1874.	13 1873.
ENGLD. & WALES....*Totals*	No. 210,781	No. 209,898	No. 203,609	No. 121,459	No. 124,099	No. 114,343
I. London	29,697	29,137	28,720	18,469	17,486	18,234
II. South-Eastern	17,658	17,238	17,072	9,400	9,159	8,661
III. South Midland	12,035	11,861	11,885	6,747	6,400	6,156
IV. Eastern	9,890	9,795	9,523	5,651	5,240	5,397
V. South-Western	13,623	13,812	13,967	7,634	7,947	7,153
VI. West Midland	25,578	25,439	25,042	13,736	14,369	12,829
VII. North Midland	12,971	13,106	12,734	7,807	7,536	6,706
VIII. North-Western	35,101	35,187	32,867	21,182	23,758	20,384
IX. Yorkshire	24,844	24,899	23,681	14,857	15,188	13,670
X. Northern	16,199	16,188	15,574	9,222	9,623	8,768
XI. Monmthsh. & Wales	13,185	13,236	12,544	6,754	7,393	6,385

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* These are revised figures, and may be found to differ somewhat from those hitherto published.

G.—*General Meteorological Table, Quarter ended September,* 1875.

[Abstracted from the particulars supplied to the Registrar-General by James Glaisher, Esq., F.R.S., &c.]

1875 Months.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames				
	Mean.	Diff. from Average of 104 Years.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.		Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Grs.	Gr.
July ...	59·1	−2·5	−3·1	56·2	−1·5	53·5	−0·4	17·5	−3·5	62·2	·412	−·005	4·7	+0·1
Aug ...	63·0	+2·2	+1·6	59·8	+2·5	57·1	+3·4	19·9	+0·1	65·8	·460	+·045	5·1	+0·5
Sept. ...	60·0	+3·5	+2·8	56·7	+2·7	53·8	+2·7	18·9	+0·4	63·7	·415	+·036	4·6	+0·4
Mean ...	60·7	+1·1	+0·4	57·6	+1·2	54·8	+1·9	18·8	−1·0	63·9	·429	+·025	4·8	+0·3

1875. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
										Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Mean.	Diff. from Average of 34 Years.	Amnt.	Diff. from Average of 60 Years.		At or below 30°.	Between 30° and 40°.	Above 40°.		
			In.	In.	Grs.	Grs.	In.	In.	Miles.				°	°
July ...	83	+ 8	29·792	−·010	531	+ 3	5·3	+2·7	286	0	2	29	36·3	56·7
Aug. ...	81	+ 5	29·868	+.075	528	− 1	2·3	−0·1	222	0	2	29	36·2	58·9
Sept. ...	80	− 1	29·867	+·062	531	− 2	2·7	+0·3	253	0	2	28	38·0	58·3
Mean ...	81	+ 4	29·842	+·042	530	0	Sum 10·3	Sum +2·9	Mean 254	Sum 0	Sum 6	Sum 86	Lowest 36·2	Highest 58·9

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of the air for July was 59°·1, being 2°·5 *lower* than the average of the preceding 104 years; and 3°·1 lower than the preceding 34 years; it was 5°·3 and 4°·3 lower than the corresponding values in 1874 and 1873.

The mean temperature of the air for August was 63°·0, being 2°·2 higher than the average of the preceding 104 years, and 1°·6 higher than the preceding 34 years; it was higher than the corresponding values in 1874 and 1873 by 2°·7 and 0°·3 respectively.

The mean temperature of the air of September was 60°·0, being 3°·5 higher than the average of the preceding 104 years, and 2°·8 higher than the preceding 34 years; it was respectively 2°·1 and 5°·3 higher than the corresponding values in 1874 and 1873.

The mean high day temperatures of the air were 0°·8 and 2°·5 higher than their respective averages in August and September, but 6°·8 lower in July.

The mean low night temperatures of the air were 2°·2 and 3°·8 higher than their respective averages in August and September, but of the same value as its average in July, viz., 53°·2.

H.—*Special Meteorological Table, Quarter ended* 30*th September*, 1875.

1 Names of Stations.	2 Mean Pressure of Dry Air reduced to the Level of the Sea.	3 Highest Reading of the Thermometer.	4 Lowest Reading of the Thermometer.	5 Range of Temperature in the Quarter.	6 Mean Monthly Range of Temperature.	7 Mean Daily Range of Temperature.	8 *Mean Temperature of the Air.*	9 Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·593	76·5	49·5	27·0	22·0	9·2	59·1	89
Osborne	29·576	85·6	44·5	41·1	35·1	17·1	60·8	84
Barnstaple	29·569	82·0	45·0	37·0	33·7	14·2	62·0	78
Blackheath	29·598	86·2	44·3	41·9	36·8	16·7	60·4	78
Royston	29·634	86·4	41·4	45·0	40·5	21·2	59·7	81
Norwich	29·536	80·0	43·8	36·2	32·7	14·7	59·9	88
Llandudno	29·607	78·0	47·2	30·8	29·2	13·4	59·5	77
Hull	29·602	83·0	42·0	41·0	33·7	15·4	58·8	80
Stonyhurst	29·594	77·7	41·8	35·9	34·1	16·4	57·8	82
North Shields	—	72·3	41·8	30·5	28·3	10·1	56·2	82

10	11	12	13	14	15	16	17	18
	Wind.						Rain.	
Names of Stations.	Mean estimated Strength.	Relative Proportion of				Mean Amount of Cloud.	Number of Days on which it fell.	Amount Collected.
		N.	E.	S.	W.			in.
Guernsey	1·1	8	7	7	9	4·4	43	7·02
Osborne	0·2	6	8	8	9	5·9	35	5·71
Barnstaple	1·2	3	7	9	11	3·5	49	12·18
Blackheath	1·3	6	7	8	10	5·7	42	9·94
Royston	—	6	6	7	11	5·9	42	8·75
Norwich	—	6	8	7	9	—	37	8·68
Llandudno	0·7	4	6	6	15	5·8	44	10·12
Hull	—	—	—	—	—	—	42	10·67
Stonyhurst	—	6	6	6	12	6·9	54	15·33
North Shields	1·5	10	7	4	10	5·8	47	11·38

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 30TH SEPTEMBER, 1875.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years* 1875-71 *inclusive.*

	1875.		1874.		1873.		1872.		1871.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
***1st Quarter*—**										
Births	31,096	3·56	29,837	3·45	30,210	3·52	29,506	3·47	28,902	3·43
Deaths	25,116	2·87	20,775	2·40	21,443	2·50	21,245	2·50	19,756	2·34
Marriages	6,369	0·73	6,777	0·78	6,618	0·77	5,820	0·68	5,415	0·64
Mean Temperature	38°·7		40°·9		38°·1		40°·7		39°·1	
***2nd Quarter*—**										
Births	32,294	3·70	32,295	3·73	31,283	3·64	30,726	3·61	30,583	3·63
Deaths	19,518	2·23	19,640	2·27	19,931	2·32	19,045	2·24	18,715	2·22
Marriages	6,638	0·76	6,730	0·78	6,690	0·78	6,398	0·75	5,946	0·70
Mean Temperature	50°·73		49°·53		49°·2		49°·2		48°·7	
***3rd Quarter*—**										
Births	30,123	3·45	30,702	3·55	28,975	3·38	29,181	3·43	28,689	3·40
Deaths	18,050	2·07	18,099	2·09	17,072	1·99	16,692	1·96	16,835	2·00
Marriages	5,723	0·65	5,582	0·64	5,816	0·68	5,891	0·69	5,424	0·64
Mean Temperature	57°·27		56°·03		55°·4		55°·8		56°·3	
***4th Quarter*—**										
Births	—	—	30,961	3·58	29,270	3·41	29,460	3·46	27,953	3·32
Deaths	—	—	22,162	2·54	18,411	2·15	18,759	2·20	19,338	2·29
Marriages	—	—	7,158	0·83	7,606	0·88	7,471	0·88	7,181	0·85
Mean Temperature	—		39°·5		42°·7		41°·8		41°·3	
***Year*—**										
Population	3,495,214		3,462,916		3,430,923		3,399,226		3,367,922	
Births	—	—	123,795	3·57	119,738	3·49	118,873	3·49	116,127	3·45
Deaths	—	—	80,676	2·33	76,857	2·24	75,741	2·22	74,644	2·22
Marriages	—	—	26,247	0·76	26,730	0·76	25,580	0·75	23,966	0·71

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th September,* 1875, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Population.		Total Births.			Illegitimate Births.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	30,123	3·45	29	2,640	8·75	11·4
Principal towns	1,079,211	1,171,228	10,508	3·59	28	945	9·0	11·1
Large "	318,740	343,640	3,535	4·11	24	249	7·0	14·3
Small "	767,487	796,597	7,197	3·61	28	583	8·1	12·3
Mainland rural	1,062,576	1,053,718	8,064	3·06	33	803	10·0	10·0
Insular "	132,004	130,031	819	2·52	40	60	7·3	13·7

Registration Groups of Districts.	Population.		Deaths.			Marriages.		
	Census, 1871.	Estimated to Middle of 1875.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,360,018	3,495,214	18,050	2·07	48	5,723	0·65	154
Principal towns	1,079,211	1,171,228	6,870	2·35	43	2,569	0·88	114
Large "	318,740	343,640	2,188	2·55	39	710	0·83	120
Small "	767,487	796,597	4,192	2·10	48	1,237	0·62	161
Mainland rural	1,062,576	1,053,718	4,352	1·65	61	1,140	0·43	233
Insular "	132,004	130,031	448	1·38	72	67	0·21	476

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th September,* 1875.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	8·8						
Northern	8·0	Shetland	5·8	Forfar	10·7	Lanark	7·4
		Orkney	12·2	Perth	9·5	Linlithgow .	9·3
North-Western	7·1	Caithness	8·2	Fife	6·5	Edinburgh .	8·9
North-Eastern	14·2	Sutherland....	5·4	Kinross	3·8	Haddington	7·7
East Midland ..	8·9	Ross and Cromarty	3·5	Clackmannan	4·2	Berwick	11·5
West Midland.	6·5	Inverness	10·2	Stirling	7·1	Peebles	8·2
		Nairn	9·0	Dumbarton ..	4·9	Selkirk	8·3
South-Western	7·3	Elgin	13·8	Argyll	7·2	Roxburgh ..	9·7
South-Eastern.	9·0	Banff	16·8	Bute	7·5	Dumfries	14·4
		Aberdeen	13·7	Renfrew........	6·1	Kirkcudbright ..	8·7
Southern	12·9	Kincardine....	15·1	Ayr................	7·8	Wigtown	18·8

IV.—*Divisional Table:*—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended* 30*th September*, 1875.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1871. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND .... *Totals*	19,639,377	3,360,018	5,723	30,123	18,050
I. Northern	2,261,622	127,191	95	770	500
II. North-Western........	4,739,876	166,351	117	1,087	630
III. North-Eastern	2,429,594	393,199	445	3,206	1,480
IV. East Midland	2,790,492	559,676	875	4,848	2,703
V. West Midland	2,693,176	251,088	368	2,008	1,333
VI. South-Western........	1,462,397	1,183,218	2,643	12,568	7,820
VII. South-Eastern	1,192,524	475,523	933	4,114	2,585
VIII. Southern	2,069,696	203,772	247	1,522	999

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended* 30*th June*, 1875; *and* BIRTHS *and* DEATHS, *in the Quarter ended* 30*th September*, 1875.

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Population.	Births.	Per 1,000 of Population.	Deaths.	Per 1,000 of Population.
	Area in Statute Acres.	Population, 1871. (*Persons.*)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,319,	22,712,	48,360	2·1	210,781	9·2	121,459	5·3
Scotland	19,639,	3,360,	5,723	1·7	30,123	8·9	18,050	5·6
Ireland	20,323,	5,412,	5,172	0·9	32,585	6·0	19,289	3·5
GREAT BRITAIN AND IRELAND	77,281,	31,484,	59,255	1·8	273,489	8·5	158,798	5·0

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. *S. J.*

Trade of United Kingdom, 1875-74-73.—*Distribution of* **Exports*** *from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Nine Months.					
	1875.		1874.		1873.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	24,324,	11,497,	27,063,	12,972,	25,650,	12,323,
Central Europe; viz., Germany, Holland, and Belgium	36,731,	31,846,	35,682,	33,868,	33,798,	38,985,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	45,724,	16,948,	44,312,	18,958,	43,547,	19,108,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	5,604,	6,987,	4,100,	6,881,	4,807,	8,149,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	11,453,	7,511,	11,583,	8,767,	14,556,	11,346,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	1,247,	420,	1,239,	441,	1,043,	360,
Western Africa	1,232,	585,	1,271,	668,	1,356,	876,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	145,	298,	282,	289,	111,	209,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	2,628,	2,061,	2,460,	1,310,	1,561,	930,
South Sea Islands	365,	2,035,	54,	26,	35,	73,
China, including **Hong Kong**	10,447,	6,731,	8,639,	7,328,	8,632,	7,919,
United States of America	53,018,	17,693,	58,827,	22,487,	55,432,	27,752.
Mexico and Central America	1,781,	1,265,	1,428,	909,	1,640,	1,135,
Foreign West Indies and Hayti	3,634,	2,858,	4,098,	2,140,	4,451,	3,276,
South America (Northern), New Granada, Venezuela, and Ecuador	984,	1,208,	958,	3,882,	1,194,	2,781,
„ **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	6,706,	3,090,	7,817,	3,195,	7,891,	4,532,
„ **(Atlantic)** Brazil, Uruguay, and Buenos Ayres	7,928,	7,463,	7,670,	9,143,	8,749,	9,810,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	351,	19,	105,	12,	102,	12,
Total—Foreign Countries	214,272,	120,515,	217,588,	131,771,	214,553,	149,571,
II.—British Possessions:						
British India, Ceylon, and Singapore	24,286,	19,962,	29,971,	20,640,	28,813,	17,484,
Austral. Cols.—N. So. W., Vict., and Queensld.	13,752,	9,351,	10,637,	8,351,	9,152,	8,229,
„ „ So. Aus., W. Aus., Tasm., and N. Zealand	7,711,	4,299,	6,443,	4,727,	6,134,	3,761,
British North America	6,068,	8,258,	7,922,	8,329,	6,597,	7,595,
„ W. Indies with Btsh. Guiana & Honduras	7,729,	2,167,	5,795,	2,241,	5,758,	2,365,
Cape and Natal	4,572,	3,488,	3,091,	3,150,	3,026,	3,239,
Brt. W. Co. of Af., Ascension and St. Helena	1,421,	569,	407,	663,	325,	487,
Mauritius	697,	268,	903,	453,	1,123,	425,
Channel Islands	384,	489,	559,	615,	457,	528,
Total—British Possessions	66,620,	48,851,	65,728,	49,169,	61,184,	44,104,
General Total £	280,892,	169,366,	283,316,	180,940,	275,737,	192,675

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* *i.e.*, British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—**First Nine Months** (*January—September*), **1875-74-73-72-71.**—*Declared Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Nine Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
RAW MATLS.—*Textile*, &c.	Cotton Wool	34,977,	38,932,	43,125,	42,218,	40,894,
	Wool (Sheep's)..	22,037,	19,349,	17,650,	16,963,	16,557,
	Silk*....................	11,271,	10,918,	10,221,	11,193,	12,096,
	Flax	3,348,	4,755,	4,400,	3,785,	4,270,
	Hemp	3,978,	4,761,	4,745,	5,010,	4,729,
	Indigo	1,544,	2,053,	2,215,	2,399,	2,466,
		77,155,	81,768,	82,356,	81,568,	81,012,
„ „ *Various.*	Hides	5,368,	4,967,	5,251,	5,024,	3,431,
	Oils	3,183,	2,599,	2,437,	3,396,	3,761,
	Metals	7,159,	7,220,	6,967,	10,198,	6,824,
	Tallow	1,407,	1,829,	2,244,	2,157,	1,913,
	Timber.................	10,272,	16,357,	12,280,	9,246,	8,450,
		27,389,	32,972,	29,179,	30,021,	24,379,
„ „ *Agrcltl.*	Guano	700,	1,275,	1,350,	8,816,	1,737,
	Seeds	6,349,	5,497,	4,589,	5,013,	5,537,
		7,049,	6,772,	5,939,	5,829,	7,274,
TROPICAL, &c., PRODUCE.	Tea	10,087,	7,702,	7,344,	8,732,	8,229,
	Coffee	6,405,	6,056,	6,336,	4,404,	4,298,
	Sugar & Molasses	14,368,	13,152,	13,990,	16,487,	14,580,
	Tobacco	2,111,	2,919,	3,090,	1,912,	3,008,
	Rice	2,047,	2,950,	2,228,	2,036,	1,800,
	Fruits	1,809,	1,743,	1,381,	1,944,	1,722,
	Wines	5,058,	5,224,	5,940,	5,940,	5,102,
	Spirits	2,283,	2,104,	2,255,	2,170,	2,255,
		44,168,	41,850,	42,564,	43,625,	40,994,
FOOD	Grain and Meal.	38,263,	39,974,	37,406,	33,198,	33,123,
	Provisions	19,411,	19,051,	16,858,	13,147,	12,634,
		57,674,	59,025,	54,264,	46,345,	45,757,
Remainder of Enumerated Articles		39,580,	26,360,	35,373,	27,528,	22,243,
TOTAL ENUMERATED IMPORTS		253,015,	255,847,	249,675,	234,916,	221,659,
Add for UNENUMERATED IMPORTS (say)		28,500,	27,373,	26,500,	27,380,	18,235,
TOTAL IMPORTS		281,515,	283,220,	276,175,	262,296,	239,894,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**First Nine Months** (*January—September*), **1875-74-73-72-71.**—*Declared Real Value, at Port of Shipment, of Articles of* BRITISH *and* IRISH *Produce and Manufactures Exported from United Kingdom.*

(Nine Months.) BRITISH PRODUCE, &c., EXPORTED.	[000's omitted.]	1875.	1874.	1873.	1872.	1871.
		£	£	£	£	£
MANFRS.—*Textile.*	Cotton Manufactures..	44,191,	45,121,	47,089,	47,467,	43,118,
	„ Yarn	9,834,	10,889,	11,735,	12,078,	11,096,
	Woollen Manufactures	17,007,	18,386,	20,343,	25,815,	20,694,
	„ Yarn	3,772,	4,062,	3,963,	4,543,	4,457,
	Silk Manufactures........	1,321,	1,614,	1,438,	1,743,	1,598,
	„ Yarn	658,	820,	1,280,	1,343,	975,
	Linen Manufactures	5,706,	5,606,	5,867,	6,367,	5,622,
	„ Yarn	1,362,	1,305,	1,624,	1,520,	1,699,
		83,851,	87,803,	93,339,	100,876,	89,259,
„ *Sewed.*	Apparel	2,268,	2,259,	2,447,	2,170,	1,972,
	Haberdy. and Mllnry.	3,913,	4,718,	5,138,	5,097,	4,524,
		6,181,	6,977,	7,585,	7,267,	6,496,
METALS, &c.	Hardware	3,196,	3,269,	3,727,	3,684,	2,803,
	Machinery	6,949,	7,269,	7,397,	5,597,	4,210,
	Iron	20,019,	23,703,	29,144,	26,591,	19.338,
	Copper and Brass........	2,771,	2,932,	2,794,	2,655,	2,379,
	Lead and Tin	1,030,	1,341,	1,167,	1,406,	1,228,
	Coals and Culm	7,329,	9,187,	9,924,	7,209,	4,490,
		41,294,	47,701,	54,153,	47,142,	34,448,
Ceramic Manufcts.	Earthenware and Glass	2,108,	2,203,	2,631,	2,258,	1,887,
Indigenous Mnfrs. and Products.	Beer and Ale...............	1,649,	1,921,	1,830,	1,530,	1,386,
	Butter	173,	184,	192,	219,	236,
	Cheese	61,	54,	55,	56,	68,
	Candles	126,	136,	157,	171,	130,
	Salt..............................	515,	510,	607,	392,	359,
	Spirits	201,	118,	166,	164,	148,
	Soda	1,726,	1,965,	2,222,	1,814,	1,268,
		4,451,	4,888,	5,229,	4,346,	3,595,
Various Manufcts.	Books, Printed	946,	628,	661,	629,	506,
	Furniture	—	—	—	—	—
	Leather Manufactures	2,835,	2,573,	2,523,	2,668,	2,769,
	Soap	233,	199,	180,	228,	167,
	Plate and Watches	199,	181,	182,	143,	131,
	Stationery	496,	501,	490,	467,	376,
		4,709,	4,082,	4,036,	4,135,	3,949,
Remainder of Enumerated Articles		14,072,	14,666,	13,773,	12,667,	13,830,
Unenumerated Articles............................		12,700,	12,620,	12,930,	11,624,	10,126,
TOTAL EXPORTS....................		169,366,	180,940,	193,676,	190,315,	163,590,

SHIPPING.—(United Kingdom.)—*Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the* **Nine Months** *ended September*, 1875-74-73.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1875.		1874.		1873.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	882,877	739,692	1,067,510	765,739	847,992	606,644
Russia { Southern „	345,669	130,914	180,561	134,982	295,633	122,289
Sweden	625,076	516,117	906,808	494,737	750,827	440,271
Norway	540,654	290,783	662,273	257,202	700,038	220,271
Denmark..............................	139,189	450,469	116,818	410,773	129,727	378,986
Germany..............................	1,117,209	1,806,056	1,173,670	1,718,882	1,245,514	1,590,546
Holland	770,573	820,536	663,887	753,718	625,422	827,726
Belgium	634,582	711,167	597,866	620,736	618,184	688,082
France..............................	1,405,018	2,036,768	1,226,737	1,791,364	1,245,718	1,863,404
Spain	492,782	444,734	617,352	397,534	776,010	404,000
Portugal	202,204	242,774	212,166	225,470	239,877	218,441
Italy..............................	233,430	672,732	173,038	577,141	178,217	544,326
Austrian territories	31,648	65,175	21,984	65,633	17,550	75,851
Greece..............................	81,205	55,097	76,539	60,738	72,815	63,213
Turkey (including Wallachia and Moldavia)	208,045	236,724	178,530	282,257	231,917	256,409
Egypt	207,672	316,322	155,214	380,594	299,560	396,705
United States of America	2,485,977	1,454,432	2,820,377	1,630,979	2,265,946	1,725,138
Mexico, Foreign West Indies, and Central America	238,824	309,757	248,473	294,821	239,832	304,498
Brazil	204,257	338,343	176,611	377,595	186,908	353,740
Peru	165,093	97,198	190,547	63,213	189,061	133,441
Chili	49,730	208,810	81,300	194,444	68,349	179,073
China	94,704	21,913	68,440	14,655	80,642	14,837
Other countries	410,473	441,325	389,651	478,105	376,157	476,014
Total, Foreign Countries	11,566,891	12,407,845	12,016,427	11,991,312	11,681,896	11,883,929
BRITISH POSSESSIONS.						
North American Colonies	784,151	557,048	1,018,514	669,584	772,574	563,209
East Indies, including Ceylon, Singapore, and Mauritius	816,753	1,037,488	778,215	983,628	716,358	854,111
Australia and New Zealand	232,256	446,495	218,791	418,943	223,840	331,741
West Indies	221,639	114,958	186,696	90,800	182,675	111,447
Channel Islands....................	199,900	131,946	185,698	124,369	185,997	129,676
Other possessions	158,830	550,194	162,420	612,371	154,977	548,457
Total, British Possessions	2,413,529	2,838,129	2,545,234	2,899,695	2,236,421	2,538,641
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Nine months ended September { 1875........	13,980,420	15,245,974	—	—	—	—
Nine months ended September { '74........	—	—	14,561,661	14,891,007	—	—
Nine months ended September { '73........	—	—	—	—	13,918,817	14,422,570

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* **Nine Months** (*January—September*), **1875-74-73.**

[000's omitted.]

(First Nine Months.)	1875.		1874.		1873.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	4,342,	27,	4,759,	16,	7,033,	16,
So. Amca. and W. Indies	927,	2,493,	2,002,	2,775,	2,061,	2,432,
United States and Cal.	8,227,	2,309,	3,216,	2,785,	3,127,	4,780,
	13,596,	4,829,	9,977,	5,576,	12,191,	7,228,
France	1,725,	1,098,	431,	893,	525,	1,020,
Germany, Holl. & Belg.	558,	806,	230,	1,834,	68,	189,
Prtgl., Spain, and Gbrltr.	81,	31,	57,	50,	132,	61,
Mlta., Trky., and Egypt	525,	19,	265,	22,	1,401,	30,
China	218,	56,	232,	231,	56,	127,
West Coast of Africa	97,	21,	106,	28,	59,	6,
All other Countries	2,138,	659,	1,058,	843,	239,	810,
Totals Imported	18,938,	7,519,	12,856,	9,477,	14,671,	9,471,
Exported to:—						
France	3,359,	1,679,	3,426,	810,	532,	2,808,
Germany, Holl. & Belg.	3,253,	352,	1,015,	585,	6,375,	1,272,
Prtgl., Spain, and Gbrltr.	1,140,	800,	811,	1,645,	3,210,	129,
	7,752,	2,831,	5,252,	3,040,	10,117,	4,209,
Ind. and China (viâ Egypt)	—	—	1,331,	4,924,	1,013,	2,255,
Danish West Indies	—	—	—	—	—	—
United States	445,	89,	9,	24,	677,	2,
South Africa	—	10,	5,	11,	214,	45,
Mauritius	—	—	—	—	—	—
Brazil	635,	—	396,	—	207,	—
All other Countries	1,279,	3,844,	1,334,	923,	2,324,	1,381,
Totals Exported	10,111,	6,774,	8,327,	8,922,	14,552,	7,892,
Excess of *Imports*	8,827,	745,	4,029,	555,	119,	1,579,
„ Exports	—	—	—	—	—	—

REVENUE.—(UNITED KINGDOM.)—30TH SEPTEMBER, 1875-74-73-72.

Net Produce in QUARTERS *and* YEARS *ended* 30*th* SEPT., 1875-74-73-72.

[000's omitted.]

QUARTERS, ended 30th Sept.	1875.	1874.	1875.		Corresponding Quarters.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	4,753,	4,572,	—	181,	5,012,	5,051,
Excise	5,746,	5,437,	—	309,	5,499,	5,365,
Stamps	2,508,	2,448,	—	60,	2,606,	2,258,
Taxes	105,	129,	24,	—	90,	81,
Post Office	1,434,	1,430,	—	4,	1,872,	1,200,
Telegraph Service	320,	300,	—	20,	460,	250,
	14,866,	14,316,	24,	574,	15,539,	14,205,
Property Tax	298,	349,	51,	—	457,	589,
	15,164,	14,665,	75,	574,	15,996,	14,794,
Crown Lands	82,	72,	—	10,	70,	70,
Miscellaneous	1,136,	1,244,	108,	—	1,276,	946,
Totals	16,382,	15,981,	183,	584,	17,342,	15,810,
			NET INCR. £401.			

YEARS, ended 30th Sept.	1875.	1874.	1875.		Corresponding Years.	
			Less.	More.	1873.	1872.
	£	£	£	£	£	£
Customs	19,594,	19,612,	18,	—	20,900,	20,626,
Excise	27,801,	27,153,	—	648,	26,109,	24,719,
Stamps	10,686,	10,461,	—	225,	10,415,	9,761,
Taxes	2,465,	2,414,	—	5,	2,359,	2,369,
Post Office	5,892,	5,520,	—	372,	5,472,	4,838,
Telegraph Service	1,140,	1,250,	110,	—	1,100,	805,
	67,578,	66,410,	128,	1,296,	66,355,	63,118,
Property Tax	3,961,	5,486,	1,525,	—	6,933,	9,802,
	71,539,	71,896,	1,653,	1,296,	73,288,	72,920,
Crown Lands	395,	380,	—	15,	375,	371,
Miscellaneous	3,983,	3,690,	—	293,	3,766,	3,771,
Totals	75,917,	75,966,	1,653,	1,604,	77,429,	77,062.
			NET DECR. £49.			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH SEPT., 1875 :—

An Account showing the REVENUE *and other* RECEIPTS *in the* QUARTER *ended* 30*th September*, 1875; *the* ISSUES *out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the* 30*th of September*, 1875, *in respect of such Charges.*

Received:—

		£
Income received, as shown in Account I		16,382,217
Amount raised on Account of Fortifications, per Act 32 and 33 Vict., cap. 76		250,000
Amount raised for Local Loans, by Exchequer Bonds		500,000
Amount received in Repayment of Advances for Public Works, &c.		409,633
,, for Greenwich Hospital		58,000
Total		£17,599,850
Excess of the sums charged on the Consolidated Fund on the 30th of September, 1875, payable in December quarter, 1875, above the Balance in the Exchequer at that date, viz.:—		
Excess of Charge in Great Britain	£4,075,732	
Surplus over Charge in Ireland	304,472	
Net deficiency		*3,771,260
		21,371,110

Paid:—

		£
Net Deficiency of the Balance in the Exchequer to meet the charge on the 30th of June, 1875, as per last account		2,408,738
Amount applied out of the Income to *Supply Services*		11,663,458
,, advanced for Greenwich Hospital		55,860
Charge of the *Consolidated Fund* on the 30th of September, 1875, viz.:—		
Permanent Charge of Debt	£4,645,901	
Terminable Annuities	754,252	
Interest of Exchequer Bills	23,058	
,, of Deficiency Advances	2,267	
		5,425,478
Interest on Local and Temporary Loans	17,500	
Other Consolidated Fund Charges:—		
The Civil List	101,511	
Other Charges (including 250,000*l.* for Fortifications)	524,662	
Advances for Public Works, &c.	1,173,908	
		7,243,059
Total		£21,371,110

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* Charge on 30th September, 1875 (as above)	£7,243,059
Paid out of Growing Produce in June quarter, 1875	1,592,372
Portion of the Charge payable in December quarter, 1875	5,650,687
To meet which there was in the Exchequer on the 30th of September, 1875	1,879,427
Net deficiency as above	3,771,260

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES), *Third Quarter of* 1875.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.		Barley.		Oats.	
1875.	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
July 3	43	6	35	5	30	4
„ 10	44	4	37	2	30	6
„ 17	46	–	33	11	30	4
„ 24	47	5	35	–	29	–
„ 31	51	–	31	4	30	7
Average for July	46	5	34	6	30	1
August 7	53	10	40	4	32	4
„ 14	51	9	34	11	30	4
„ 21	53	–	33	7	32	1
„ 28	52	9	31	4	28	–
Average for August	52	10	35	–	30	8
September 4	49	3	35	–	30	–
„ 11	48	8	35	7	29	–
„ 18	48	7	35	7	27	4
„ 25	47	1	35	9	26	9
Average for September	48	4	35	5	28	3
Average for the quarter	49	–	34	11	29	5

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* Third Quarter (*July—September*) *of* **1875.**

[0,000's omitted.]

1	2	3	4	5	6	7	
Issue Department.					Collateral Columns.		
Liabilities.		Assets.					
Notes Issued.	Dates. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.	
£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1875.	Per cnt.
41,03	July 7	11,02	3,98	26,03	28,58	8 July	3
41,82	„ 14	11,02	3,98	26,82	28,46		
42,44	„ 21	11,02	3,98	27,44	28,25		
42,92	„ 28	11,02	3,98	27,92	28,23	29 „	2½
43,00	Aug. 4	11,02	3,98	28,00	28,93		
43,18	„ 11	11,02	3,98	28,18	28,48	12 Aug.	2
43,59	„ 18	11,02	3,98	28,59	28,17		
43,63	„ 25	11,02	3,98	28,63	27,93		
43,33	Sept. 1	11,02	3,98	28,33	28,29		
42,92	„ 8	11,02	3,98	27,92	28,03	7 Oct.	2½
42,39	„ 15	11,02	3,98	27,39	27,94	14 „	3½
42,11	„ 22	11,02	3,98	27,11	27,76	21 „	4
41,72	„ 29	11,02	3,98	27,18	28,82		

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates. (Wdnsdys.)	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns	£ Mlns.	£ Mlns.	1875.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,31	5,11	25,59	,34	July 7	14,87	20,84	12,45	,76	48,92
14,55	3,34	4,08	26,05	,37	„ 14	15,17	19,17	13,36	,79	48,39
14,55	3,38	3,38	26,65	,37	„ 21	14,18	18,97	14,19	,80	48,33
14,55	3,38	3,59	26,22	,38	„ 28	14,03	18,71	14,69	,69	48,12
14,55	3,57	3,57	25,16	,42	Aug. 4	13,89	18,48	14,07	,69	47,11
14,55	3,43	3,43	25,60	,41	„ 11	13,79	18,19	14,70	,71	47,39
14,55	5,60	3,60	25,68	,38	„ 18	13,49	17,91	15,42	,81	47,63
14,55	3,39	4,10	25,24	,37	„ 25	13,49	17,77	15,70	,70	47,66
14,55	3,68	4,09	25,01	,36	Sept. 1	13,59	18,70	15,04	,70	47,70
14,55	3,68	4,73	23,67	,37	„ 8	13,56	17,98	14,89	,58	47,01
14,55	3,68	5,11	23,06	,38	„ 15	13,56	18,07	14,45	,70	46,77
14,55	3,70	5,07	22,55	,37	„ 22	13,56	17,89	14,35	,44	46,24
14,55	3,69	4,62	22,91	,40	„ 29	13,58	19,01	12,90	,79	46,18

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND *and* WALES *on Saturday in each Week during the* THIRD QUARTER (*July—September*) *of* 1875; *and in* SCOTLAND *and* IRELAND, *at the Three Dates, as under.*

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. *Saturday.*	*London:* Cleared in each Week ended *Wednesday.**	Private Banks. (Fixed Issues, 3,80).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,66).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1875.	£	£	£	£	1875.	£	£	£	£	£	£
July 3	112,78	2,40	2,25	4,65							
„ 10	101,57	2,46	2,28	4,74	July 10	2,05	4,00	6,05	3,60	2,92	6,52
„ 17	122,53	2,44	2,26	4,70							
„ 24	83,52	2,41	2,25	4,66							
„ 31	114,07	2,38	2,23	4,61							
Aug. 7	93,68	2,40	2,23	4,63	Aug. 7	1,99	3,96	5,95	3,58	2,93	6,51
„ 14	116,13	2,39	2,23	4,62							
„ 21	80,60	2,36	2,22	4,58							
„ 28	115,70	2,35	2,21	4,56							
Sept. 4	89,18	2,38	2,22	4,60	Sept. 4	1,95	5,93	5,87	3,56	2,98	6,53
„ 11	107,79	2,43	2,25	4,68							
„ 18	86,83	2,46	2,29	4,75							
„ 25	105,86	2,50	2,33	4,83							

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under,* LONDON *on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on* LONDON.

1	2	3	4	5	6	7	8	9
				Calcutta.				
DATES.	London on Paris. 3 m.d.	London on Hamburg. 3 m.d.	New York. 60 d. s.	India Council.* 60 d. s.	At Calcutta on London. 6 m. d.	Hong Kong. 6 m. d.	Sydney. 30 d. s.	Standard *Silver* in bars in London. pr. oz.
1875.			per. cnt.	*d.*	*d.*	*d.*	per cnt.	*d.*
July 10	25·62½	20·78	4·87½	21¼	22$\frac{1}{16}$	—	—	55$\frac{11}{16}$
„ 24	25·57½	20·75	4·87	21⅜	21$\frac{5}{16}$	—	—	55$\frac{11}{16}$
Aug. 7	25·50	20·65	—	21⅛	—	—	—	56
„ 21	25·47½	20·65	4·87	21¾	22⅛	49⅛	½ dis.	54⅞
Sept. 4	25·57½	20·61	4·85½	21¾	22$\frac{3}{16}$	—	—	56¾
„ 18	25·47½	20·65	4·79	21¾	22$\frac{1}{16}$	49	—	56¾

* Bankers' drafts.

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HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.

STATISTICAL SOCIETY.

ALMANACK

FOR

1875.

SOMERSET HOUSE TERRACE (KING'S COLLEGE ENTRANCE),
STRAND, W.C.

LONDON:
EDWARD STANFORD, CHARING CROSS, S.W.

1874.

HARRISON AND SONS,
PRINTERS IN ORDINARY TO HER MAJESTY,
ST. MARTIN'S LANE, LONDON.

STATISTICAL SOCIETY.

ALMANACK FOR 1875.

This Almanack, now issued for the first time, has been compiled with the primary object of supplying the Officers and Fellows of the Society with a standing reminder of the days and hours of the General and Ordinary Meetings of the Society, of the Council and of their Executive Committee. The advantages of such a reminder, in the case especially of sudden and unexpected changes in the Official Staff, must be obvious to all who have any experience in the working of societies or other similar institutions. This portion of the Almanack is printed in a characteristic type. The days and hours of meeting of the Institute of Actuaries have also been inserted.

In the subsidiary arrangements of the Almanack care has been taken to bring together the greatest amount of information that the space could be made to contain; occurrences, and the births and deaths of distinguished persons, being arranged in two separate columns (with the exception of Kings and Queens of England and of some distinguished Fellows and Founders of the Statistical Society, whose names will be found on the left-hand page). In this work of compilation recourse has been had to the best sources of information, among which the last edition of "Haydn's Dictionary of Dates" ought to be specially mentioned.

In collecting the facts relating to these two heads of occurrences and personal history, much labour has been expended, the work of collection and revision having been entrusted successively to several persons. But, as even with this precaution, perfect accuracy is not immediately attainable, corrections and suggestions for improvement are invited, and if forwarded to the Assistant Secretary, will receive due attention.

A complete List of the Officers and Fellows of the Society, with its Rules, is appended to the Almanack, to which is added a List of the principal Statistical Documents issued by the several State Departments, with particulars which cannot fail of affording most useful information, especially to the Foreign Honorary Members of the Society; and also a series of Tables of Equivalents of Imperial and Metric Weights and Measures. The Society is indebted to Mr. H. Reader Lack, of the Statistical Department of the Board of Trade, and one of the Secretaries of the Society, for these two compilations.

During the year 1875 the Council hope to make arrangements for compiling *Tables of Constants* relating to Population, Pauperism, Crime, Education, Imports and Exports, &c., with a view to their publication with the Almanack for 1876.

Statistical Society,

December, 1874.

1875. JANUARY, 31 Days.

Day of Month.	Day of Week.	
1	Fri.	**Statistical Society:** Annual Subscriptions due in advance (Rule 9). Coronation of Charles II, 1651.
2	Sat.	Queen Adelaide died, 1849.
3	Sun.	2nd Sunday after Christmas.
4	Mon.	
5	Tues.	Duke of York died, 1827. Dividends due at Bank.
6	Wed.	Epiphany. Old Christmas-day (Twelfth-day).
7	Thurs.	Princess Charlotte born, 1796.
8	Fri.	Prince Albert Victor of Wales born, 1864.
9	Sat.	
10	Sun.	1st Sunday after Epiphany.
11	Mon.	Plough Monday. Old New Year's day.
12	Tues.	**Statistical Society:** Executive Committee meets. Institute of Actuaries: Council meets.
13	Wed.	
14	Thurs.	**Statistical Society:** Council meets. (To choose an Auditor of the Council. Rule 21.)
15	Fri.	Queen Elizabeth crowned, 1550.
16	Sat.	
17	Sun.	2nd Sunday after Epiphany.
18	Mon.	
19	Tues.	**Statistical Society:** Third Ordinary Meeting, 1874-75. (To choose two Auditors, not of the Council. Rule 21.)
20	Wed.	John Howard died, 1790. Edward II dethroned, 1327.
21	Thurs.	Henry Hallam, F.S.S., died, 1859.
22	Fri.	
23	Sat.	The Tooke Professor of Economic Science and Statistics, gave his first lecture at King's College, 1860.
24	Sun.	Septuagesima Sunday.
25	Mon.	Edward III crowned. Institute of Actuaries: Third Ordinary Meeting.
26	Tues.	**Statistical Society:** Executive Committee meets.
27	Wed.	
28	Thurs.	Death of Henry VIII, 1547.
29	Fri.	George III died, 1820.
30	Sat.	Execution of Charles I, 1649.
31	Sun.	Sexagesima Sunday.

JANUARY, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Union of Great Britain and Ireland, 1801. Duty on candles repealed, 1832.	Edmund Burke born, 1733.	1
Institution of Civil Engineers established, 1818. Calcutta taken, 1757.	General Wolfe born, 1726. Dr. Andrew Ure (chemist) died, 1857.	2
Hampden imprisoned, 1642.	General Monk died, 1670.	3
Arrest of the Five Members, 1642. Declaration of war with Spain, 1762.	Sir Joseph Banks born, 1743.	4
Exchequers of Gt. Brit. and Ireland amalg., and Consolidated Fund formed, 1816.		5
	William Spence (naturalist) died, 1860.	6
Common Prayer Book authorised by Parliament, 1548. Calais taken, 1558.	Fénélon died, 1715. Sir Thomas Lawrence died, 1830.	7
	Galileo died, 1642.	8
Lord Nelson's Funeral, 1806.	Emperor Napoleon III died, 1873.	9
Penny Post estab. 1840. Royal Exchange burnt, 1838. Metrop. Rail. opened, 1863.	Archbishop Laud beheaded, 1645.	10
University College Chartered, 1826.	George Washington born, 1732. Sir Hans Sloane died, 1752.	11
Surrender of Carthagena, 1874.	Dean Alford died, 1871. Edward Forbes (naturalist) born, 1815.	12
First No. of the *Daily Universal Register* published, since named the *Times*, 1785.	George Rose (statist) died, 1818.	13
	Edmund Halley (astronomer) died, 1742. Victor Cousin died, 1867.	14
British Museum opened, 1759. Alabama Claim Convention signed, 1869.	Molière born, 1622. Sir Henry Ellis died, 1869.	15
Battle of Corunna, 1809. Hartley Colliery Explosion, 1862.	Spenser died, 1599. Edward Gibbon died, 1794.	16
Battle of Falkirk, 1746.	Benjamin Franklin born, 1706.	17
British Institution opened, 1806. German Empire proclaimed, 1871.	Daniel Webster born, 1782. Lord Lytton died, 1873.	18
Storming of Ciudad-Rodrigo, 1812.	James Watt born, 1736.	19
London Docks opened, 1805. First English Parliament, 1265.	Sir John Soane (architect) died, 1837.	20
Execution of Louis XVI, 1793. Vaccination introduced, 1799.		21
National debt commenced, 1690. Wreck of the "Northfleet," 1873.	Lord Bacon born, 1561. Sir W. Snow Harris died, 1867. Byron born, 1788.	22
Commercial Treaty between France and England signed, 1860.	William Pitt d., 1806. Sir Francis Burdett d., 1844. Duke of Kent d., 1820.	23
King of Prussia's visit to England, 1842.	Charles James Fox born, 1749. Frederick the Great born, 1712.	24
Princess Royal married to Prince Frederick William of Prussia, 1858.	Robert Boyle born, 1627. George Dolland b., 1774.	25
Brazil discovered by Vicente Pinzon, 1500. Sydney (Australia) founded, 1788.	Edward Jenner died, 1823.	26
Greece declared independent, 1822.	Dr. Hutton (math.) died, 1823. Mozart born, 1756. Prof. Sedgwick died, 1873.	27
Capitulation of Paris, 1871. Battle of Aliwal, 1846.	William Prescott died, 1859. Sir Francis Drake died, 1596.	28
First Ref. Par., 1833. Vict. Cross inst., 1856. Wellington Coll. (Sandhurst) compl. 1859.		29
Commonwealth proclaimed, 1649.	Dr. R. B. Todd died, 1860. Francis Chesney died, 1872.	30
Greathead's Life Boat first used at Shields, 1790. "Great Eastern" launched, 1858.	Dr. George Edward Day died, 1872.	31

FEBRUARY, 28 Days.

Day of Month.	Day of Week.	
1	Mon.	**Statistical Society:** Names of Defaulters to be Exhibited (Rule 9).
2	Tues.	Candlemas.
3	Wed.	
4	Thurs.	
5	Fri.	Regency of the Prince of Wales proclaimed, 1811.
6	Sat.	Death of Charles II, and Accession of James II, 1685. Birth of Queen Anne, 1665.
7	Sun.	QUINQUAGESIMA. SHROVE SUNDAY.
8	Mon.	Mary Queen of Scots beheaded, 1587.
9	Tues.	**Statistical Society:** Executive Committee. Shrove Tuesday. **Institute of Actuaries:** Council meets.
10	Wed.	Ash Wednesday Queen Victoria married, 1840. Richard II said to have been murdered, 1400.
11	Thurs.	**Statistical Society:** Council Meeting.
12	Fri.	Lady Jane Grey beheaded, 1554.
13	Sat.	William and Mary proclaimed by Convention Parliament, 1689.
14	Sun.	1ST SUNDAY IN LENT. QUADRAGESIMA. St. Valentine's Day.
15	Mon.	
16	Tues.	**Statistical Society:** Fourth Ordinary Meeting. Auditor's Report.
17	Wed.	Adolphe Quetelet died, 1874.
18	Thurs.	
19	Fri.	
20	Sat.	
21	Sun.	2ND SUNDAY IN LENT.
22	Mon.	Adolphe Quetelet born, 1796. **Institute of Actuaries:** Fourth Ordinary Meeting.
23	Tues.	**Statistical Society:** Executive Committee.
24	Wed.	
25	Thurs.	Hare hunting ends.
26	Fri.	Thomas Tooke, F.S.S., died, æt. 84, 1858.
27	Sat.	Thanksgiving for Recovery of the Prince of Wales at St. Paul's, 1872.
28	Sun.	3RD SUNDAY IN LENT. Humphrey Duke of Gloucester, died.

FEBRUARY, 28 Days.

Occurrences.	Births and Deaths.	Day of Month.
		1
York Minster set on fire by Jonathan Martin (a maniac), 1829.	Olinthus Gregory (mathematician) died, 1841.	2
Green-bag Inquiry, 1817.	Biot (astronomer) died, 1862.	3
Fair on Thames, 1814. Telegraphs trans. to Govmt., 1870. Coomassie taken, 1874.	John Latham (physician) died, 1837.	4
Earthquake in Italy, 40,000 lives lost, 1783.	Sir Robert Peel born, 1788. Dr. John Lindley (botanist) born, 1799.	5
House of Peers abolished 1649. Holloway Prison opened, 1852.	Dr. Priestley died, 1804.	6
	Charles Dickens born, 1812.	7
Lord Mayo assassinated, 1872.	William Mitford (historian) died, 1827. Poet Crabbe died, 1832.	8
Bishop Hooper burnt, 1555.	Nevi Maskelyne (astronomer) died, 1811.	9
Peace of Paris (Canada ceded), 1763.	Sir David Brewster died, 1868. Michelet died, 1874.	10
University College founded, 1826.	Descartes d., 1650. W. Brand (chemist) died, 1866. L. Foucault died, 1868.	11
	John Hunter born, 1728. Sir Astley Cooper died, 1841.	12
Massacre of Glencoe, 1692. Tri. of Warren Hastings, 1788. Gt. fire at Pantech., 1874.	Galileo born, 1564. P. M. Roget (physician) died, 1869.	13
	Captain James Cook killed, 1779.	14
Treaty of Hubertsburg, closes 7 years' war, 1763. Coals in London 52*s.* a ton, 1873.	Dr. R. Macnish born, 1802. Cardinal Wiseman died, 1865.	15
Burke executed, 1829.	Melanchthon born, 1497. Lindley Murray died, 1826.	16
Battle of St. Albans, 1461. Battle of Meeanee, 1843.	Michael Angelo died, 1563. Molière died, 1673.	17
	Martin Luther died, 1546. Charles Lamb b., 1775. G. Peabody b., 1795.	18
Gethin Colliery accident, 1861.	Nicholas Copernicus born, 1473. Alessandro Volta born, 1745.	19
	Voltaire born, 1694. Joseph Hume died, 1855.	20
Brit. troops enter Hyderabad 1843. Pneumatic Despatch Conveyance Co. opd. 1863.	Spinoza died, 1677. Earl of Mayo born, 1822.	21
	George Washington born, 1732.	22
Cato Street Conspiracy, 1820. Lake Victoria Nyanza discovered, 1863.	Diego Columbus died, 1526. Sir Joshua Reynolds died, 1792.	23
Cash payments suspended, 1797.	Henry Cavendish died, 1810. John Keats (poet) died, 1821.	24
Earl of Essex beheaded, 1601. French Revolution of 1848.	Sir Christopher Wren died, 1723.	25
Wreck of the Birkenhead, 1852. Treaty of Versailles, 1871.	Arago born, 1786. Thomas Moore died, 1852.	26
Treaty of Amiens, 1802.	John Evelyn died, 1706. Longfellow born, 1807.	27
Tichborne Trial ended, 1874.		28

MARCH, 31 Days.

Day of Month.	Day of Week.	
1	Mon.	St. David's Day.
2	Tues.	Dr. Neil Arnott, F.S.S., died, 1874.
3	Wed.	
4	Thurs.	Henry VI deposed, 1461.
5	Fri.	
6	Sat.	
7	Sun.	4th Sunday in Lent. Entrance into London of Princess Alexandra of Denmark, 1863.
8	Mon.	Death of William III, and Accession of Queen Anne, 1702.
9	Tues.	**Statistical Society**: Executive Committee. Charles Knight, F.S.S. d., 1873. Institute of Actuaries: Council meets.
10	Wed.	Prince of Wales married, 1863.
11	Thurs.	**Statistical Society**: Council Meeting, 4·30 P.M.
12	Fri.	
13	Sat.	
14	Sun.	5th Sunday in Lent.
15	Mon.	**Statistical Society**: founded, 1834.
16	Tues.	**Statistical Society**: Fifth Ordinary Meeting, 7·45 P.M.
17	Wed.	St. Patrick's Day.
18	Thurs.	
19	Fri.	
20	Sat.	Death of Henry IV, and Accession of Henry V, 1413.
21	Sun.	Palm Sunday.
22	Mon.	
23	Tues.	**Statistical Society**: Executive Committee.
24	Wed.	Death of Queen Elizabeth, and Union of Crowns of England and Scotland under James I, 1603.
25	Thurs.	Maundy Thursday. Lady Day.
26	Fri.	Good Friday. Bank Holiday.
27	Sat.	**Statistical Society**: Office Closed. Death of James I, and Accession of Charles I, 1625.
28	Sun.	Easter Sunday. The Prince Consort became Patron of the Statistical Society, 1840.
29	Mon.	Easter Monday. Bank Holiday. Institute of Actuaries: Fifth Ordinary Meeting.
30	Tues.	
31	Wed.	

MARCH, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Opening of the Indo-European Telegraph, 1865. German troops enter Paris, 1871.	Professor Barlow (astronomer) died, 1862.	1
Emperor Nicholas died, 1855.	John Wesley died, 1791.	2
	Robert Hooke, F.R.S., died, 1703.	3
Howard recvd. thanks of H.C. Prison Acts passed, 1774. Eman. Serfs in Russ., 1861.	Lord Somers born, 1652.	4
Battle of Barrosa, 1811. Covent Garden Theatre burnt, 1856.	Mercator b., 1512. La Place d., 1827. John Conolly (physician) died, 1866.	5
Peace of Radstadt, 1714.	Michael Angelo b., 1474. Jos. H. Green (surgeon) d., 1818. Dr. Parr d., 1825.	6
	Lord Collingwood died, 1810.	7
	William Cowper (poet) died, 1709.	8
David Rizzio assassinated, 1566.	William Cobbett born, 1762.	9
Census of 1801.	John Playfair (mathematician) born, 1748.	10
First London Daily Paper published, 1702. Charing Cross Railway opened, 1864.	Tasso born, 1544. William Huskisson born, 1770. Sir J. Outram died, 1863.	11
Chelsea Hosp. f., 1682. Treaty of Alliance bet. England, France, and Turkey, 1854.	Dr. William Buckland (geologist) born, 1784.	12
Uranus (Georgium Sidus) discovered by Sir William Herschel, 1781.	Priestley born, 1733. Earl Grey born, 1764.	13
Admiral Byng executed, 1757.	John F. Daniell (chemist) died, 1845.	14
Lucknow captured, 1858. Lake Albert Nyanza discovered by Sir S. Baker, 1864.	Admiral Earl St. Vincent died, 1823.	15
	Prince Imperial born, 1856.	16
Dukedom of Cornwall instituted, 1337.	Sir J. E. Smith (founder of Linnæan Society) died, 1828.	17
	Sir Robert Walpole died, 1745.	18
	Horne Tooke died, 1812.	19
Flight of Louis XVIII from Paris, 1815.	Sir Isaac Newton died, aged 85, 1727.	20
Marriage of the Princess Louise and the Marquis of Lorne, 1871.	Thomas Cranmer burnt, 1556. David Nasmith (founder of City Missions) b., 1799.	21
Stamp Act received Royal Assent, 1765. Reform Bill passed House of Commons, 1832.	John Canton (electrician) d., 1772. Emp. of Germany b., 1797. Goethe d., 1832.	22
	La Place born, 1749.	23
Sir F. Burdett arrested, 1810. Southwark Bridge opened, 1819.	John Evelyn died, 1699. Lord Chesterfield died, 1773.	24
Abolition of the Slave Trade by Parliament. 1807. Thames Tunnel opened, 1843.		25
Royal Agricultural Society of England incorporated, 1840.	Vanbrugh (arch.) d., 1726. James Hutton (geologist) d., 1797. Beethoven d., 1827.	26
Peace of Amiens, 1802.		27
War declared with Russia, 1854.	Raffael born, 1483. Sir Ralph Abercromby died, 1801.	28
Atmos. Rail., Dublin, op., 1844. Roy. Albert Hall opened by the Queen, 1871.	Earl of Derby born, 1799. John Keble died, 1866.	29
Sicilian Vespers began, 1282.	William Hunter (physician) died, 1783. Henry Lord Hardinge born, 1785.	30
Census of 1851. Al. Sov. enter Paris, 1814. Remains of Nap. I dep. in Invalides, 1861.	Descartes born, 1596. Haydn born, 1732.	31

APRIL, 30 Days.

Day of Month.	Day of Week.	
1	Thurs.	
2	Fri.	Death of Prince Arthur, 1502.
3	Sat.	Game Licence expires,
4	Sun.	Low Sunday.
5	Mon.	Dividends due.
6	Tues.	**Statistical Society**: Executive Committee. Death of Richard I, 1199.
7	Wed.	Prince Leopold born, 1853.
8	Thurs.	**Statistical Society**: Council Meeting, 4·30 P.M.
9	Fri.	Death of Edward IV, and Accession of Edward V, 1483.
10	Sat.	
11	Sun.	2nd Sunday after Easter. William and Mary crowned, 1689.
12	Mon.	
13	Tues.	Institute of Actuaries: Council meets.
14	Wed.	
15	Thurs.	
16	Fri.	
17	Sat.	
18	Sun.	3rd Sunday after Easter.
19	Mon.	
20	Tues.	**Statistical Society**: Sixth Ordinary Meeting.
21	Wed.	Death of Henry VII, and Accession of Henry VIII, 1509. Death of Duke of Sussex, 1843.
22	Thurs.	
23	Fri.	Thanksgiving of George III at St. Paul's Cathedral, 1789. St. George's Day.
24	Sat.	
25	Sun.	4th Sunday after Easter.
26	Mon.	Institute of Actuaries: Sixth Ordinary Meeting.
27	Tues.	**Statistical Society**: Executive Committee.
28	Wed.	
29	Thurs.	
30	Fri.	

APRIL, 30 Days.

Occurrences.	Births and Deaths.	Day of Month.
Dutch Independence, 1572. International Exhibition on the Champ de Mars, 1867.	Harvey born, 1578. Bishop Heber died, 1826.	1
Bombardment of Copenhagen, 1801.	Richard Cobden died, 1865. Samuel Morse (Elec. Telegraph) died, 1872.	2
Indian Mutiny, 1857. Garibaldi visits England, 1864. Census of 1871.	John Napier (mathematician) died, 1617. John Abernethy born, 1764.	3
	Oliver Goldsmith died, 1774.	4
British Museum originated, 1753. Napoleon I abdicated, 1814.	Thomas Hobbes born, 1588. Sir Henry Havelock born, 1795.	5
Siege of Badajoz, 1812.	James Mill born, 1773.	6
England, France, and Austria remonstrate with Russia on cruelties in Poland, 1863.	Dr. Blair born, 1718.	7
Census of 1861.	Lorenzo de Medici died, 1492. J. C. Loudon (botanist) born, 1783.	8
Sebastopol bombarded, 1855.	Lord Bacon died, 1626. Isambard Brunel (engineer) born, 1806.	9
Chartist Demonstration, 1848. Battle of Toulouse, 1814.	William Cheselden (surgeon) died, 1752. Robert Jameson (geologist) died, 1854.	10
Peace of Utrecht, 1713.	George Canning born, 1770.	11
America discovered by Columbus, 1492. National Gallery founded, 1824.	Admiral Lord Gardner born, 1742. Edward Young (poet) died, 1765.	12
Roman Catholic Relief Bill passed, 1829. Magdala stormed, 1868.	Handel died, 1759.	13
Battle of Barnet, 1471.	Otway died, 1685. Sir John Duckworth died, 1817.	14
	Thomas Beddoes (physician) born, 1760. Thomas Drummond (engineer) d., 1840.	15
Printing disc., 1436. Battle of Culloden, 1746. Napoleon III visited England, 1865.	Sir Hans Sloane b., 1660. Sir John Leslie b., 1766. Thiers b., 1797. Buffon d., 1788.	16
	Benjamin Franklin died, 1790.	17
New South Wales discovered, 1770.	Dr. Darwin d., 1802. Sir R. Smirke d., 1867. Baron von Liebig died, 1873.	18
	David Ricardo b., 1772. Lord Byron d., 1824. Ric. Westmacott (sculp.) d., 1872.	19
Long Parliament dissolved by Cromwell, 1653.	Emperor Napoleon III born, 1808. Sir W. Tite, M.P. (architect), died, 1873.	20
Bombardment of Odessa, 1854.	Racine died, 1699.	21
Royal Society Incorporated, 1663.	Fielding (novelist) born, 1707. Bishop Heber born, 1783.	22
Order of Garter instituted, 1349.	Shakespeare died, 1616. Lord Anson born, 1697. Wordsworth died, 1850.	23
Glass duties abolished, 1845.	Daniel Defoe died, 1731.	24
Bank of England founded, 1694.	Cromwell born, 1599. W. Cowper (poet) d., 1800. Patrick Colquhoun d., 1820.	25
New Orleans taken, 1862.	Thomas Reid (metaph.) born, 1710. David Hume born, 1711.	26
Order of St. Michael and St. George founded, 1818.	Robert Bruce (traveller) died, 1794.	27
Mutiny of the Bounty, 1789. Columbia Market opened, 1869.	Ludwig Tieck (poet, &c.) died, 1853.	28
	Emperor of Russia born, 1818.	29
Bat. of Fontenoy, 1745. University College com., 1827. Irish Church disestab., 1868.	Sir Henry Bishop (musician) died, 1855. Admiral Fitzroy (meteor.) died, 1865.	30

MAY, 31 Days.

Day of Month.	Day of Week.	
1	Sat.	
2	Sun.	Rogation Sunday.
3	Mon.	Royal Academy Exhibition opens.
4	Tues.	
5	Wed.	
6	Thurs.	Ascension Day. Holy Thursday.
7	Fri.	
8	Sat.	
9	Sun.	Sunday after Ascension Day.
10	Mon.	
11	Tues.	**Statistical Society:** Executive Committee. Institute of Actuaries: Council meets.
12	Wed.	
13	Thurs.	**Statistical Society:** Council Meeting, 4·30 P.M. John Howard elected F.R.S., 1756.
14	Fri.	
15	Sat.	Whitsun-day (a fixed quarter day for Scotch Leases).
16	Sun.	Whit Sunday. Edward I crowned, 900.
17	Mon.	Whit Monday. Bank Holiday.
18	Tues.	**Statistical Society:** Seventh Ordinary Meeting.
19	Wed.	Anne Boleyn beheaded, 1536.
20	Thurs.	
21	Fri.	Van de Weyer, F.S.S., died, 1874.
22	Sat.	
23	Sun.	Trinity Sunday.
24	Mon.	Queen Victoria born, 1819.
25	Tues.	**Statistical Society:** Executive Committee.
26	Wed.	Derby Day.
27	Thurs.	Corpus Christi. King John crowned, 1199.
28	Fri.	
29	Sat.	Charles II restored, 1660.
30	Sun.	1st Sunday after Trinity.
31	Mon.	

MAY, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Union of England & Scotland as Gt. Britain, 1707. Great Exhibition opened, 1851.	John Dryden died, 1701. Joseph Addison b., 1672. Duke of Wellington b., 1769.	1
Princess Charlotte married to Prince Leopold, 1816.	William Hunter born, 1718.	2
Jamaica dis. by Columbus, 1494: taken from Spain, 1655. Bat. of Cape Finisterre, 1747.	Thomas Hood died, 1845. Livingstone died, 1873.	3
Battle of Tewkesbury, 1471. Capture of Seringapatam, 1799.	Sir Isaac Barrow died, 1677. William Prescot born, 1796.	4
Battle of Fuentes d'Onoro, 1811. Opening Fine Art Exhibition, Manchester, 1857.	Napoleon Bonaparte died, 1821. Fred. Humboldt died, 1859.	5
Battle of Prague, 1757. Stamped Postage Covers introduced, 1840.	Sir James Simpson (physician) died, 1870.	6
	Lord Brougham died, aged 89, 1868.	7
Peace of Bretigny, 1360. Siege of Orleans, 1429.	Lavoisier died, 1794.	8
	Gay-Lussac died, 1850. John Stuart Mill died, 1873.	9
President Davis taken, 1865.	Dr. Normandy died, 1864.	10
Assass. of Mr. Perceval, 1812. New Bldngs, Burlington House opd. by the Queen, 1870.	William Pitt, Earl of Chatham died, 1778. Sir John Herschel died, 1871.	11
Wentworth Earl Stafford beheaded, 1641. The present Custom House opened, 1817.	Sir Charles Barry died, 1860.	12
Pope Pius IX born, 1792.	Baron Cuvier died, 1832. John Dollond (optician) died, 1852.	13
Vaccination discovered, 1796.	Gabriel Fahrenheit born, 1686.	14
Archimedes (Screw-propelled Ship) put to sea, 1839. Paris Indust. Exhib. opd., 1855.	John Bonnycastle died, 1821. O'Connell died, 1847.	15
Battle of Albuera, 1811.		16
Court of Session instituted in Scotland by James V, 1532.	Edward Jenner born, 1749. Catherine of Russia died, 1727.	17
War with France declared, 1803. The Queen distributes Crimean Medals, 1855.	Dr. Andrew Ure born, 1778. Victor Emanuel born, 1820.	18
Legion of Honour instituted, 1802. Netley Hospital founded, 1856.	James Boswell died, 1795.	19
Siege of Acre, 1799.	Christopher Columbus died, 1506. Miles Coverdale died, 1567.	20
Island of St. Helena discovered, 1502. Montrose executed, 1650.	Thomas Warton (poet) died, 1790. Maria Edgeworth died, 1849.	21
	Alexander Pope born, 1688.	22
Bat. of St. Albans, 1455. Bat. of Ramillies, 1706. Habeas Corpus Act suspd., 1794..	Elias Ashmole (antiquary) born, 1617. Mark Lemon died, 1870.	23
Book of Sports published, 1618. Irish Rebellion, 1798.	Nicholas Copernicus died, 1543. Salisbury (Lord Treasurer) died, 1612.	24
Richard Cromwell resigns, 1659.	John Mason Good (physician) born, 1764. William Paley died, 1805.	25
Dr. J. Crane (practised the Cool Regimen) d., 1652. Handel's first Commem., 1784.		26
The Habeas Corpus Act passed, 1679. Mutiny at the Nore, 1797. Census of 1811.	Calvin died, 1564. Duke of Cumberland born, 1819.	27
Census of 1821. Great Fire at Quebec, 1845. Ionian Islands annexed to Greece, 1864.	William Pitt b., 1759.	28
Census of 1831.	Sir Humphrey Davy died, 1829.	29
Joan of Arc burnt at Rouen, 1431. John Francis fires at the Queen, 1842.	Alex. Pope died, 1744. Voltaire died, 1778. Sir James Mackintosh died, 1832.	30
30 Years' War commenced, 1618. Canton taken, 1841.	Sir J. Malcombe d., 1833. Thomas Chalmers died, 1847. Haydn died, 1809.	31

JUNE, 30 Days.

Day of Month.	Day of Week.	
1	Tues.	
2	Wed.	
3	Thurs.	
4	Fri.	Field of Cloth of Gold (Henry VIII and Francis I), 1520.
5	Sat.	Institute of Actuaries: Annual Meeting, 3 P.M.
6	Sun.	2ND SUNDAY AFTER TRINITY.
7	Mon.	
8	Tues.	**Statistical Society**: Executive Committee.
9	Wed.	
10	Thurs.	**Statistical Society**: Council Meeting, 4·30 P.M. Subject of the Howard Essay for 1876 to be selected.
11	Fri.	Death of George I, and Accession of George II, 1727.
12	Sat.	
13	Sun.	3RD SUNDAY AFTER TRINITY.
14	Mon.	
15	Tues.	**Statistical Society**: Eighth Ordinary Meeting.
16	Wed.	
17	Thurs.	
18	Fri.	
19	Sat.	
20	Sun.	4TH SUNDAY AFTER TRINITY. Death of William IV, and Accession of Queen Victoria, 1837.
21	Mon.	Longest Day. Edward III died, 1377.
22	Tues.	**Statistical Society**: Executive Committee. Richard II crowned, 1377. Educational Conference presided over by Prince Albert, 1857.
23	Wed.	
24	Thurs.	Midsummer Day.
25	Fri.	Edward V deposed, 1483.
26	Sat.	George IV died, 1830. Accession of William IV.
27	Sun.	
28	Mon.	Queen Victoria crowned, 1838.
29	Tues.	**Statistical Society**: Annual Meeting.
30	Wed.	**Statistical Society**: Essays for Howard Medal to be sent in.

JUNE, 30 Days.

Occurrences.	Births and Deaths.	Day of Month.
Lord Howe's Victory, 1794.	Charles Lever (novelist) died, 1872.	1
No Popery (Gordon) Riots, 1780. House of Commons voted 10,000*l.* to Jenner, 1802.	Charles Butler (R. C. divine) died, 1832.	2
	Harvey died, 1657. Cobden born, 1804.	3
Somerset House founded, 1776. Battle of Magenta, 1859.	Lord Eldon born, 1751.	4
	Roger Cotes (math.) d., 1716. Adam Smith b., 1723. Sir. J. Richardson d., 1865.	5
	Lord Anson died, 1762. Jeremy Bentham died, 1832.	6
R. Exchange founded, 1564. Allied Monarchs visit Eng., 1814. Census of 1841.	John Rennie (C.E.) born, 1761. Sir James Simpson (physician) born, 1811.	7
	Sir Joseph Paxton died, 1865.	8
	G. Stephenson b., 1781. Sir. B. Brodie b., 1783. Charles Dickens d., 1870.	9
Crystal Palace opened by the Queen, 1854.	Thomas Hearne (antiquary) died, 1735.	10
	Roger Bacon d., 1292. Robertson (historian) d., 1793. Sir. J. Franklin d., 1847.	11
Rye House Plot disc., 1683. First Stone of Eddystone L. laid, 1757. Malta taken, 1798.	Dr. Arnold died, 1842.	12
Metropolitan Cattle Market opened, 1855.	Dr. Thomas Young (natural philosopher) born, 1773.	13
Battle of Naseby, 1645. Battle of Marengo, 1800.	Colin Maclaurin (math.) died, 1746. Henry Mackenzie (novelist) died, 1831.	14
Magna Charta signed, 1215. Insur. of Watt Tyler, 1381. 1st Lond. Hospl. Sunday, 1873.	Benjamin Moseley died, 1819.	15
Battle of Cape St. Vincent, 1693. Battle of Dettingen, 1743.	Duke of Marlborough d., 1722. Bp. Butler died, 1752. John Snow (phys.) died, 1858.	16
Battle of Bunker's Hill, 1775. Battle of Gwalior, 1858.	John Wesley born, 1703. Joseph Addison died, 1719. Lord Canning died, 1862.	17
War with America, 1812. Battle of Waterloo, 1815. Waterloo Bridge opd. 1817.	George Grote died, 1871.	18
Emperor Maximilian shot, 1867.	Sir John Barrow born, 1764. Sir Joseph Banks died, 1820.	19
Tragedy of the Black Hole, Calcutta, 1756.		20
1st Stone of S. Paul's laid by Sir C. Wren, 1675. St. Thomas's Hospital opened, 1871.	Leibnitz born, 1646.	21
Income-Tax (*7d.* in the pound) imposed, 1842.		22
Battle of Plassy, 1757. Engagement off L'Orient, 1795. Volunteers in H. Pk., 1860.	Mark Akenside died, 1770. Lord Campbell died, 1861.	23
Canada (North America) discovered by John and Sebastian Cabot in 1497.	Duke of Marlborough born, 1650. John Hampden died, 1643.	24
Battle of Bannockburn, 1314. Order of the "Star of India" instituted, 1861.	Horne Tooke born, 1736.	25
Great Storm London, 1788. First coalition agst France, 1792. Repeal Corn Law, 1846.	James Syme (surgeon) died, 1870.	26
Massacre of Cawnpore, 1857.	Charles XII born, 1682. William Cruikshank died, 1800.	27
	Sir William Follett died, 1845.	28
	Sir James Clark (physician) died, 1870.	29
Acquittal of the [illegible] Bishops, 1688. G.W.R. opened from London to Bristol, 1841.	William Roscoe (historian) died, 1831.	30

JULY, 31 Days.

Day of Month.	Day of Week.	
1	Thurs.	**Statistical Society:** Subscriptions in arrear to be applied for (Rule 9). Session closes (Rule 17).
2	Fri.	
3	Sat.	Dog days begin.
4	Sun.	6th Sunday after Trinity.
5	Mon.	Dividends due.
6	Tues.	**Statistical Society:** Executive Committee. Henry II died, 1189. Edward VI died, 1553.
7	Wed.	Death of Edward I, and Accession of Edward II, 1307.
8	Thurs.	**Statistical Society:** Council Meeting, 4·30 P.M. Edward II crowned, 1307.
9	Fri.	Henry Hallam (Treasurer S. S.) born, 1777.
10	Sat.	
11	Sun.	7th Sunday after Trinity.
12	Mon.	
13	Tues.	
14	Wed.	
15	Thurs.	St. Swithin.
16	Fri.	
17	Sat.	
18	Sun.	8th Sunday after Trinity.
19	Mon.	George IV crowned, 1821.
20	Tues.	
21	Wed.	
22	Thurs.	
23	Fri.	
24	Sat.	
25	Sun.	9th Sunday after Trinity.
26	Mon.	
27	Tues.	
28	Wed.	
29	Thurs.	
30	Fri.	
31	Sat.	Royal Academy Exhibition closes.

JULY, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Martyrdom of John Bradford, 1555. Battle of the Boyne, 1690.	Bishop Hall born, 1574.	1
Battle of Marston Moor, 1644.	Sir Robert Peel died by accident, 1850. Sir Charles Bell died, 1850.	2
Hungerford Market opened, 1833.	Anthony Todd Thomson (physician) born, 1778.	3
American Independence, 1776. First London Omnibus, 1829.	Chateaubriand died, 1848.	4
Capture of Jerusalem by Crusaders, 1100. Battle of Wagram, 1809.	Admiral Fitzroy (meteor.) born, 1805. Andrew Crosse (electr.) died, 1855.	5
Sir Thomas More beheaded, 1535. Third Derby Cabinet formed, 1866.	John Huss born, 1373; burnt, 1415. Flaxman born, 1755.	6
Treaty of Tilsit, 1807.	Richard Brinsley Sheridan died, 1816.	7
First stone of Thames Embankment laid, 1864. Irish Land Bill, 1870.	Adam Smith died, 1790.	8
Alexandra Palace burnt, 1873.	Edmund Burke died, 1797. Dr. Keith Johnston (geographer) died, 1871.	9
London Bridge burnt, 1212. Visit of Belgian Volunteers, 1867.	Calvin born, 1509.	10
Battle of Oudenarde, 1708.	Robert Jameson (geologist) born, 1774. George Atwood (math.) died, 1807.	11
Crimea evacuated, 1856. Visit of Sultan of Turkey, 1867.	Erasmus died, 1536.	12
Battle of Devizes, 1643. Irish and Scotch Reform Acts pass, 1868.	Dr. Dee born, 1527. Richard Cromwell d., 1712. James Bradley (astr.) d., 1762.	13
Bastille destroyed, 1789. War declared between France and Prussia, 1870.	Richard Bentley (sch.) died, 1742.	14
Duke of Monmouth beh., 1685. Surrender of Napoleon I to Capt. Maitland, 1815.	Wenthrop M. Praed (poet) died, 1839.	15
Flight of Mahomet, 622.	Sir J. Reynolds b., 1723. Sir W. Lawrence b., 1783. Jane Austen (novelist) d., 1817.	16
Cawnpore recaptured, 1857.	Dr. Watts born, 1674.	17
The Pope declared Infallible, 1870.	Petrarch died, 1374. Bishop Sherlock died, 1761.	18
Battle of Halidon Hill, 1333. Spanish Armada destroyed, 1588.	John Playfair (math.) d., 1819. Bishop Wilberforce died (by accident), 1873.	19
Committal of Smith O'Brien, 1846.	Petrarch born, 1304.	20
Army Purchase abolished, 1871.	Burns died, 1796. Inigo Jones died, 1852.	21
	George Shaw (zoologist) died, 1813.	22
Rebellion at Dublin, 1803. Jewish Disabilities Bill passed, 1858.		23
Window Tax and House Duty repealed, 1851. Capture of Gibraltar, 1704.	Alexander Dalrymple (hydrographer) born, 1737.	24
Peace of Breda, 1667. Battle of Aboukir, 1799.	Thomas à Kempis died, 1471. S. T. Coleridge (poet, &c.) died, 1834.	25
Royal Assent to Irish Church Bill, 1869. Great Strike of London Cabmen, 1853.	Saint Victor De Niepce (photographer) born, 1805.	26
Bank of England incorporated, 1694. Atlantic Telegraph completely laid, 1866.	Thomas Campbell (poet) born, 1777. Dr. John Dalton (chemist) died, 1844.	27
Battle of Talavera, 1809. Walcheren Exped., 1809. Independence of Peru, 1821.	Cowley (poet) died, 1667. Earl of Durham died, 1840.	28
Metropolitan Houseless Poor Act passed, 1864.	William Wilberforce died, 1833. Dr. John Elliotson died, 1868.	29
French Revolution, 1830. Part of the Thames Embankment opened, 1868.	William Penn d., 1718. Poet Gray d., 1771. Henry Mansel (theol.) died, 1871.	30
Island of Trinidad discovered by Columbus, 1498.	John Canton (electrician) born, 1718.	31

AUGUST, 31 Days.

Day of Month.	Day of Week	
1	Sun.	10th Sunday after Trinity. Lammas. William Rufus killed, 1100. Death of Queen Anne, and Accession of George I of Hanover, 1714.
2	Mon.	Bank Holiday.
3	Tues.	Henry I crowned, 1100.
4	Wed.	Oyster Season begins.
5	Thurs.	
6	Fri.	Duke of Edinburgh born, 1844.
7	Sat.	Queen Caroline died, 1821.
8	Sun.	11th Sunday after Trinity.
9	Mon.	
10	Tues.	
11	Wed.	Dog Days end.
12	Thurs.	Grouse Shooting begins.
13	Fri.	
14	Sat.	King's College, London, incorporated, 1829.
15	Sun.	12th Sunday after Trinity.
16	Mon.	
17	Tues.	
18	Wed.	
19	Thurs.	
20	Fri.	Blackcock Shooting commences.
21	Sat.	
22	Sun.	13th Sunday after Trinity. Accession of Henry VII, 1485.
23	Mon.	
24	Tues.	
25	Wed.	
26	Thurs.	Prince Consort born, 1819.
27	Fri.	
28	Sat.	
29	Sun.	14th Sunday after Trinity.
30	Mon.	
31	Tues.	Death of Henry V, 1422.

AUGUST, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Battle, Nile, 1798. New London Brdg. open., 1831. Slavery ceases in Colonies, 1834.	John Walker (lexicographer) died, 1807.	1
Mail Coaches first began running 1784. India Bill passed, 1858.	John Joseph Gurney (philanthropist) born, 1788. Gainsborough died, 1788.	2
First Stone of Bank of England laid, 1732.	Sir R. Arkwright died, 1792. Sir Joseph Paxton born, 1803.	3
Battle of Wissembourg, 1870.	Lord Burleigh died, 1598. Professor Aytoun (poet) died, 1865.	4
Peace of Cambray, 1529.	Bishop Blomfield died, 1857. Lord Howe died, 1799.	5
	W. H. Wollaston born, 1766.	6
Landing of St. Augustine in Britain, 596. Battle before Metz, 1870.	Fénélon born, 1651. Bacon (sculptor) died, 1799.	7
	George Canning died, 1827.	8
Neutrality of Belgium guaranteed, 1870. Elementary Education Bill passed, 1870.	John Dryden born, 1631. Telford born, 1757. Dr. Andrew Combe died, 1847.	9
Battle, St. Quintin, 1557. Greenwich Observatory f., 1675. Brighton Aqua. o., 1872.		10
Frobisher Straits discovered, 1576. "Statistical Criminal Act" passed, 1869.	Richard Mead (physician) born, 1673.	11
	George Stephenson died, 1848.	12
Titus Oates' Popish Plot, 1678. First Exec. under Cap. Pun. within Prisons Act, 1868.	Laennec died, 1826.	13
First Printed Book (of Psalms) published, 1457. Battle of Blenheim, 1704.	Dean Buckland (geologist) died, 1856. Dr. C. Hutton (math.) born, 1737.	14
Opening of part of Suez Canal, 1865. New Reform Act passed, 1867.	Napoleon Bonaparte born, 1769.	15
Gas first used in London, 1807. Manchester Riots, 1819.	Lavoisier born, 1743. William Daniell (painter) died, 1837.	16
Battle of Saldanha Bay, 1796.	Adm. Blake d., 1657. Frederick the Great died, 1786.	17
Engagement off Cape Lagos, 1759.	Dr. James Beattie died, 1803. Sir David Baird died, 1829.	18
	John Flamsteed (astronomer) born, 1646.	19
Railway Accident at Abergele, 1868.	Thomas Simpson (mathematician) born, 1710.	20
Battle of Vimiera, 1808.	Lady Mary Wortley Montague died, 1762.	21
Battle of the Standard, 1138. Battle of Bosworth Field, 1485.	Warren Hastings died, 1818.	22
Wallace executed, 1305. D. of Buckingham assassd., 1628. Newsp. Stamp imp., 1713.	Baron Cuvier born, 1769.	23
Massacre of St. Bartholomew, 1572.	William Wilberforce born, 1759.	24
Victoria Railway Bridge (Canada) opened, 1860.	David Hume died, 1776. James Watt died, 1819. Faraday died, 1867.	25
Battle of Crecy, 1346. Trincomalee captured, 1795. First French Rail. op. 1837.	Sir Robert Walpole born, 1676.	26
Bombardment of Algiers, 1816.	Sir Jonas Moore (math.) died, 1679. James Thomson (poet) died, 1748.	27
Habeas Corpus suspended, 1799.	Goethe born, 1749. Sir William Blizard (surgeon) died, 1835.	28
Commercial Treaty with China, 1842. "Royal George" sunk, 1782.	John Locke born, 1632. Sir C. Napier (conqueror of Scinde) died, 1853.	29
John C. Nield bequeathed about 250,000l. to the Queen, 1852.	David Hartley (phys.) b., 1705. Paley b., 1743. Francis Baily (astr.) died, 1844.	30
	John Bunyan died, 1688.	31

Day of Week.	
Wed.	Partridge Shooting begins. Henry VI crowned, 1422.
Thurs.	John Howard born, 1726.
Fri.	Richard I crowned, 1189.
Sat.	
Sun.	15TH SUNDAY AFTER TRINITY.
Mon.	
Tues.	Queen Elizabeth born, 1533.
Wed.	William IV crowned, 1831.
Thurs.	William the Conqueror died at Rouen, 1087.
Fri.	
Sat.	
Sun.	16TH SUNDAY AFTER TRINITY.
Mon.	Salmon Fishing in Scotland ends.
Tues.	
Wed.	
Thurs.	Death of James II in exile, 1701.
Fri.	
Sat.	
Sun.	17TH SUNDAY AFTER TRINITY.
Mon.	
Tues.	Edward II murdered, 1327.
Wed.	Coronation of George III, 1761.
Thurs.	Day and Night equal.
Fri.	
Sat.	
Sun.	18TH SUNDAY AFTER TRINITY. William II crowned, 1087.
Mon.	
Tues.	
Wed.	Michaelmas Day. Eclipse of Sun, partially visible in England. Richard II dethroned, 1399.
Thurs.	Henry IV crowned, 1399.

SEPTEMBER, 30 Days.

Occurrences.	Births and Deaths.	Day of Month.
Government of East India Co. ceased, 1858. Cannon-street Railway opened, 1866.	Sir Richard Steele died, 1729. Sir James Pennethorne (architect) died, 1871.	1
Great Fire of London, 1666. New Style adopted in London, 1752.		2
St. Bart. Fair (Smithfield) held, circa 1133. Bat. of Worcester, 1651. Micr. So. f., 1839.	Sir Edward Coke died, 1634. Oliver Cromwell died, 1658.	3
New Caledonia discovered by Cook, 1774. French Republic declared, 1870.	R. Dudley, Earl of Leicester died, 1588.	4
Island of Heligoland taken from the Danes by British, 1807. Charter of E.I.C., 1698.	Dr. Dalton (chemist) born, 1766.	5
Battle of Ghiznee, 1842.	Colbert died, 1492.	6
Total Loss of H.M.S. Captain, 1870.	Samuel Wilberforce born, 1805.	7
Convention of Closterseven, 1757. Sebastopol taken, 1855.	John Leyden born, 1775.	8
Battle of Flodden Field, 1513. Corporation Reform Act, 1835.	Archbishop Trench born, 1807.	9
Battle of Pinkey, 1547.	Mungo Park born, 1771.	10
Battle of Malplaquet, 1709. Prince Consort Member of Privy Council, 1849.	David Ricardo died, 1823. Lady Palmerston died, 1869.	11
Battle of Vienna, 1683.	Lord Thurlow died, 1806. Peter Mark Roget (physician) died, 1869.	12
Capture of Quebec and Death of Wolfe, 1759.	Lord Burleigh born, 1520. Charles Jas. Fox died, 1806. Montaigne died, 1592.	13
Battle of Homeldon Hill, 1402. Award of Arbitrators on Alabama Claims, 1872.	Duke of Wellington died, 1852.	14
Huskisson killed on Liverpool and Manchester Railway, 1830.	Isambard Brunel died, 1859. Captain Speke (traveller) died, 1864.	15
Mont Cenis Tunnel opened, 1871.	Fahrenheit died, 1736. Thomas Graham (chemist) died, 1869.	16
Cape of Good Hope captured, 1795. London and Birmingham Railway opened, 1838.		17
	Joseph Locke died, 1860. Samuel Johnson born at Lichfield, 1709.	18
Victory of Poitiers, 1356.	Lord Brougham born, 1799.	19
Peace of Ryswick, 1697. Battle of the Alma 1854. Hanover annexed to Prussia, 1866.	Joannes Gruter (philologist) died, 1627. Bishop Gauden died, 1662.	20
Battle of Preston Pans, 1745. Brighton Railway opened, 1841.	Sir Walter Scott died, 1832.	21
Battle of Zutphen, 1586.	Lord Chesterfield born, 1694.	22
Battle of Assaye, 1803. London General Post Office opened, 1829.	Bishop Jewell died, 1571. Dr. Matthew Baillie died, 1823.	23
	William of Wykeham died, 1404. Dean Milman died, 1868.	24
Siege of Paris commenced, 1870.	Samuel Butler died, 1680. Richard Porson died, 1808.	25
The Holy Alliance signed, 1815.	Thomas Clarkson died, 1846.	26
Battle of Busaco, 1810.		27
Strasburg capitulated, 1870.	Bossuet born, 1627. Sir William Jones born, 1746.	28
New Metropolitan Police began, 1829.	Lord Clive born, 1725. Horatio Nelson born, 1758.	29
Peace between France and Algiers, 1800.	George Whitfield died, 1770. James Brindley died, 1772.	30

OCTOBER, 31 Days.

Day of Month.	Day of Week.	
1	Fri.	Pheasant Shooting begins.
2	Sat.	University College, London, opened, 1828.
3	Sun.	19TH SUNDAY AFTER TRINITY.
4	Mon.	
5	Tues.	Dividends due.
6	Wed.	
7	Thurs.	
8	Fri.	King's College, London, opened, 1831.
9	Sat.	
10	Sun.	20TH SUNDAY AFTER TRINITY.
11	Mon.	
12	Tues.	Institute of Actuaries: Council meets.
13	Wed.	
14	Thurs.	
15	Fri.	
16	Sat.	
17	Sun.	21ST SUNDAY AFTER TRINITY.
18	Mon.	Fox Hunting begins. Charles Babbage died, 1871.
19	Tues.	King John died, 1216.
20	Wed.	
21	Thurs.	
22	Fri.	
23	Sat.	Prince Alfred declines the Throne of Greece, 1862.
24	Sun.	22ND SUNDAY AFTER TRINITY. James I styled King of Great Britain, 1604.
25	Mon.	Death of Stephen, 1154. Death of George II, and Accession of George III, 1760.
26	Tues.	
27	Wed.	
28	Thurs.	Henry III crowned, 1216. King Alfred died, 901.
29	Fri.	Hare Hunting begins.
30	Sat.	
31	Sun.	23RD SUNDAY AFTER TRINITY.

OCTOBER, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Explosion of Gunpowder at Belvedere Magazine, Woolwich, 1864.	Robert Simson (mathematician) died, 1768. E. Landseer died, 1873.	1
London University opened, 1828. Explosion of Gunpowder on Regent's Canal, 1874	Arago died, 1853.	2
Treaty of Limerick, 1691.	Beccaria b., 1716. Admiral Keppel d., 1786. Sir R. Adair (diplomat.) d., 1855.	3
New River finished, 1613. First English Bible printed, 1535.	John Milner born, 1752. Guizot born, 1787. Bishop Horsley died, 1806.	4
	Lord Kenyon born, 1732. Lord Cornwallis died, 1805.	5
Great Explosion and Fire at Gateshead and Newcastle, 1854.	Henry Mansel (theol.) born, 1820. William Marsden (antiquary) died, 1836.	6
Fire at Chicago, 1871.	Thomas Reid (metaphysician) died, 1796. Marshal Burgoyne died, 1871.	7
Papal States incorporated with Italy, 1870.	Sir Richard Blackmore (phys. and poet) d., 1729. Dr. A. Kippis (biog.) died, 1795.	8
	Cervantes born, 1547. Bishop Tomline born, 1750.	9
Lines of Torres Vedras, 1810. Victory of Agra, 1857.	Joseph B. Jukes (geologist) born, 1811.	10
Order of the Bath instituted, 1399. Jamaica Riots, 1865.	William Molyneaux (mathematician) died, 1698.	11
St. Salvador discovered by Columbus, 1492. Capture of Pekin, 1860.	Hugh Miller (geol.) b., 1802. General R. Lee died, 1870. Canova died, 1822.	12
Murat executed, 1815. Panic in New York, 1857.	Professor Barlow (mathematician) born, 1776.	13
Battle of Hastings, 1066. Battle of Jena, 1806. Moscow burnt by Russians, 1812.	William Penn born, 1644.	14
Bishops Ridley and Latimer burnt, 1555.		15
Houses of Parliament burnt, 1834.	John Hunter died, 1793. Henry Martyn (missionary) died, 1812.	16
Murder of Sir Edmundbury Godfrey, 1678.	Phillip Sidney died, 1586. Sir John Bowring born, 1792.	17
Battle of Leipzic, 1813.	Lord Palmerston died, 1865.	18
St. George's Hospital founded, 1733. Surrender of Lord Cornwallis, 1781.	Dean Swift died, 1745. Sir James South (astronomer) died, 1867.	19
Battle of Navarino, 1827.	Thomas Linacre died, 1524. Lord Palmerston, b., 1784. Sir C. Wren b., 1632.	20
Battle of Trafalgar and Death of Nelson, 1805.	Sir George Cornewall Lewis born, 1806. Sir Benjamin Brodie died, 1862.	21
Revocation of Edict of Nantes, 1685. Sir Cloudesley Shovel wrecked, 1707.	Sir Roderick Murchison died, 1871.	22
Civil War begins, 1642. First Parliament of Great Britain met, 1707.	Lord Jeffrey born, 1773. Earl of Derby died, 1869.	23
Peace with China, 1860.	Tycho Brahe d., 1601. Sir J. Mackintosh born, 1765. Daniel Webster died, 1852.	24
Battle of Agincourt, 1415. Battle of Balaklava, 1854.	Chaucer died, 1400. Lord Macaulay born, 1800.	25
Cholera Morbus in England, 1831. Wreck of Royal Charter, 1859.	Dr. Doddridge died, 1751. William Hogarth died, 1764.	26
Capitulation of Metz, 1870.	Captain Cook born, 1728. Dr. Andrew Combe born, 1797.	27
Island of Cuba discovered by Columbus, 1492. Royal Exchange opened, 1844.	Erasmus born, 1467. John Wallis (mathematician) died, 1703.	28
Sir Walter Raleigh beheaded, 1618. Bristol Riots, 1831.	James Boswell born, 1740. John Keats (poet) born, 1795.	29
Coal Exchange opened, 1849.	R. B. Sheridan born, 1751. Lord Dundonald died, 1860.	30
Reformation began by Martin Luther, 1517.	John Evelyn born, 1620. W. P. Rosse (astronomer) died, 1867.	31

NOVEMBER, 30 Days.

Day of Month.	Day of Week.	
1	Mon.	**Statistical Society:** Session commences (Rule 17). Queen Victoria proclaimed in India, 1858.
2	Tues.	Duke of Kent born, 1767.
3	Wed.	
4	Thurs.	
5	Fri.	
6	Sat.	Princess Charlotte died, 1817.
7	Sun.	24th Sunday after Trinity.
8	Mon.	
9	Tues.	**Statistical Society:** Executive Committee. Institute of Actuaries: Council meets. Lord Mayor's Day. Prince of Wales born, 1841.
10	Wed.	
11	Thurs.	**Statistical Society:** Council Meeting, 4·30 P.M. Martinmas.
12	Fri.	
13	Sat.	
14	Sun.	25th Sunday after Trinity.
15	Mon.	
16	Tues.	**Statistical Society:** First Ordinary Meeting, 1875-76. Death of Henry III, 1272.
17	Wed.	Accession of Queen Elizabeth, 1558.
18	Thurs.	
19	Fri.	
20	Sat.	Edward I crowned, 1272.
21	Sun.	26th Sunday after Trinity. Princess Royal born, 1840.
22	Mon.	
23	Tues.	**Statistical Society:** Executive Committee.
24	Wed.	
25	Thurs.	
26	Fri.	
27	Sat.	
28	Sun.	1st Sunday in Advent.
29	Mon.	Institute of Actuaries: First Ordinary Meeting, 1875-76.
30	Tues.	St. Andrew's Day.

NOVEMBER, 30 Days.

Occurrences.	Births and Deaths.	Day of Month.
Great Earthquake at Lisbon, 1755.	Dr. Radcliffe died, 1714. Spencer Perceval b., 1762. John Lindley d., 1865.	1
	Richard Hooker died, 1600.	2
Island of Dominica discovered by Columbus, 1493. Acre taken, 1840.	Viscount Gough born, 1799. Sir John Leslie died, 1832.	3
Newport Riots suppressed, 1839.	George Peabody died, 1869. Mendelssohn died, 1847.	4
Gunpowder Plot, 1605. New City Library and Museum at Guildhall opened, 1872.	Jesse Ramsden (optician) died, 1800. Churchill (poet) died, 1764.	5
Holborn Viaduct and Blackfriars Bridge opened, 1869.	Sir Thomas Roe (diplomatist) died, 1644.	6
Battle of Moultan, 1848.	Sir M. Frobisher died, 1594.	7
The Pacification of Ghent, 1576. Capitulation of Verdun, 1870.	John Milton died, 1674. Edmund Halley (astronomer) born, 1656.	8
Slight Earthquake at Liverpool, 1852.	Mark Akenside born, 1721.	9
Antigua discovered by Columbus, 1493. Great Fire at Boston, U.S.A., 1872.	Martin Luther born, 1483. Oliver Goldsmith born, 1728.	10
	Thomas Willis (anatomist) died, 1675. Lord Truro died, 1855.	11
Suspension of Bank Charter Act of 1844, 1857.	Bishop Gardiner died, 1555. Richard Baxter born, 1615.	12
Dijon occupied by the Germans, 1870.	Sir John Forbes (physician) died, 1861.	13
Source of Blue Nile dis. by Bruce, 1770. Austro-Hungarian Monarchy estab., 1868.	Leibnitz died, 1716.	14
Battle of Morgarten, 1315.	Earl of Chatham born, 1708. Sir Wm. Herschel b., 1738. Rossini d., 1868.	15
National Volunteer Association founded, 1859.	James Ferguson (astronomer) died, 1776.	16
Robt. Lowe elected first M.P. for Univ. of London, 1868. Suez Canal opened, 1869.	Sir Charles Eastlake born, 1793. Robert Owen d., 1858. Lord Erskine d., 1823.	17
Funeral of the Duke of Wellington, 1852.	Sir David Wilkie (painter) died, 1785. Edward Forbes (naturalist) died, 1854.	18
Blackfriars Bridge opened, 1769.	Nicholas Poussin died, 1665.	19
Battle of Quiberon Bay, 1759.	Abraham Tucker (metaph.) d., 1774. Hayley (poet) d., 1820. Lord Elgin d., 1863.	20
	Sir J. Hawkins (nav.) died, 1595. Richard Lane (engraver) died, 1872.	21
The Passage to India discov. by Vasco de Gama, 1497. Nap. III elect. Emp., 1852.	Dugald Stewart b., 1753. Lord Clive d., 1774. Sir John Hill (phys., &c.) d., 1775.	22
	Sir John Barrow died, 1848. Sir John Bowring died, 1872.	23
Queen Elizabeth attended a Thanksgiving at St. Paul's, 1588. Tasmania disc., 1642.	J. Knox d., 1572. Bacon (sculptor) b., 1740. Lord Melbourne died, 1848.	24
Wreck of the Royal Adelaide, 1872.	Dr. I. Watts died, 1748. John Kitto died, 1854.	25
	William Cowper (poet) died, 1800. John McAdam d., 1836. Mar. Soult d., 1851.	26
Straits of Magellan disc. by Portuguese, 1520. Eddystone Lighthouse destroyed, 1703.	De la Rive (electrician) died, 1873.	27
Amiens surrendered, 1870.	Victor Cousin born, 1792. Washington Irving died, 1859.	28
Berlin Decrees, 1806. First Metropolitan School Board elected, 1870.	Cardinal Wolsey d., 1530. Philip Sidney. b,. 1554. J. Ray (naturalist) b., 1628.	29
Separation of England and America, 1782. Turkish Fleet destroyed at Sinope, 1853.	Dr. W. Gilbert (electrician) died, 1603. Dean Swift born, 1667.	30

DECEMBER, 31 Days.

Day of Month.	Day of Week.	
1	Wed.	Henry I died, 1135. Princess of Wales born, 1844.
2	Thurs.	Queen Adelaide died, 1849.
3	Fri.	
4	Sat.	
5	Sun.	2nd Sunday in Advent.
6	Mon.	
7	Tues.	**Statistical Society:** Executive Committee.
8	Wed.	
9	Thurs.	**Statistical Society:** Council Meeting, 4·30 P.M. Grouse shooting ends.
10	Fri.	
11	Sat.	Accession of Stephen, 1135. James II abdicates, 1688.
12	Sun.	3rd Sunday in Advent.
13	Mon	
14	Tues.	Institute of Actuaries: Council meets. Prince Consort died, 1861. Serious illness of the Prince of Wales, 1871.
15	Wed.	
16	Thurs.	Oliver Cromwell, Protector, 1653.
17	Fri.	
18	Sat.	
19	Sun.	4th Sunday in Advent. Henry II crowned, 1154.
20	Mon.	
21	Tues.	**Statistical Society:** Second Ordinary Meeting, 1875-76. Shortest day.
22	Wed.	
23	Thurs.	Funeral of Prince Consort, 1861.
24	Fri.	**Statistical Society's** Rooms Closed. Christmas Eve.
25	Sat.	Christmas Day. Bank Holiday. William I crowned, 1066.
26	Sun.	1st Sunday after Christmas. Stephen crowned, 1135. Charles Babbage, F.S.S. born, 1792.
27	Mon.	Institute of Actuaries: Second Ordinary Meeting, 1875-76.
28	Tues.	**Statistical Society:** Executive Committee.
29	Wed.	Malthus, F.S.S., died, 1834.
30	Thurs.	
31	Fri.	

DECEMBER, 31 Days.

Occurrences.	Births and Deaths.	Day of Month.
Smithfield Market (London) opened, 1868.	Dr. Birkbeck died, 1841.	1
The Quire of St. Paul's opened, 1697. Battle of Austerlitz, 1805.	Mercator died, 1594.	2
Battle of Hohenlinden, 1800.		3
Suttee abolished in India, 1829.	John Gay died, 1732. Thomas Carlyle born, 1795. Lord Liverpool died, 1828.	4
	Mozart died, 1791.	5
Rhode Island taken, 1776. Relief of Cawnpore, 1857.	George Monk born, 1608. Gay Lussac born, 1778.	6
First London "Gazette" published, 1665. Marshal Ney shot, 1815.	Algernon Sidney beheaded, 1683. Flaxman d., 1826. R. Liston (surgeon) d., 1848.	7
Œcumenical Council opened, 1869.	George Boole (mathematician) died, 1864.	8
	John Milton born, 1608. Vandyck died, 1641.	9
Battle of Bushire, 1856.	Edm. Gunter (math.) d., 1626. Hogarth b., 1697. Edw. Norris (antiq.) d., 1872.	10
Charles XII of Sweden killed, 1718.	Sir David Brewster born, 1781.	11
Rome made Capital of Italy, 1870.	Dr. John Armstrong died, 1829. Marc Isambard Brunel died, 1849.	12
Clerkenwell Explosion, 1867.	Samuel Johnson died, 1784. Joseph Henry Green (surgeon) died, 1863.	13
Blois occupied by the Germans, 1870.	Sir James Clark (physician) born, 1788. George Washington died, 1799.	14
Fortifications of Paris commenced, 1840.	Isaac Walton died, 1683. Romney (painter) born, 1734.	15
Foundation of New Post Office, 1870. Commercial Treaty with Austria, 1865.	John Selden b., 1584. Jane Austen (novelist) b., 1785. Weber b., 1786.	16
Milan Decree signed, 1807.	Thos. Guy (fo. of Guy's Hospl.) d., 1724. Beethoven b., 1770. Sir H. Davy b., 1779.	17
Battle of Moodkee, 1845.	Wesley b., 1708. J. Davidson (trav.) killed, 1836. Sam. Rogers (poet) died, 1855.	18
	Turner (painter) died, 1851. Lord Dalhousie died, 1860.	19
	Thomas Graham (chemist) born, 1805.	20
Battle of Ferozeshah, 1845.	Sir John Sinclair died, 1835.	21
First Meeting of the Metropolitan Board of Works, 1855.	W. H. Wollaston died, 1828.	22
Great Earthquake at Japan, 1854.	Bishop Warburton born, 1698. Sir R. Arkwright born, 1732.	23
Wreck of the St. George, 1811. Peace of Ghent, 1814.	Vasco de Gama d., 1524. Spinoza b., 1632. Crabbe (poet) born, 1754.	24
Coldest Christmas Day for 50 years, 1860. Mont Cenis Tunnel completed, 1870.	Sir Isaac Newton born, 1642. Sir Matthew Hales died, 1676.	25
	Thomas Gray born, 1716.	26
Treaty of Methuen, 1703.	John Kepler born, 1571. Dr. Blair died, 1800. Charles Lamb died, 1834.	27
Westminster Abbey dedicated, 1065.	Dr. Keith Johnston born, 1804. Lord Macaulay died, 1859.	28
Thomas à Becket assassinated, 1170. Capture of Canton, 1857.	Sir Archibald Alison born, 1792.	29
	Roger Ascham (scholar) died, 1568. Marshal Prim died, 1870.	30
Battle of Wakefield, 1460.	J. Wickliffe d., 1387. J. Flamsteed (astr.) died, 1799. Marmontel died, 1799.	31

Classified List of the Principal Statistical Returns published by Public Departments, in each Division of the United Kingdom.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Population	Census Returns every ten years (last in 1871) Annual Reports of Births, Deaths, and Marriages in each Year ended 31st December Weekly and Quarterly Returns of Births, Marriages, and Deaths, in the Principal Towns	England and Wales	General Register Office, London.
		Scotland	General Register Office, Edinburgh.
		Ireland	General Register Office, Dublin.

Note.—The Registrars-General of England and Scotland act under the directions of the Secretary of State for the Home Department, and the Registrar-General of Ireland under the Lord Lieutenant of Ireland.

Paupers	Annual Reports relating to Relief of the Poor in Years ended 25th March	England and Wales	Local Government Board, London.
	Annual Reports relating to Relief of the Poor in Years ended 14th May	Scotland................	Board of Supervision for Relief of the Poor, Edinburgh.
	Annual Reports relating to Relief of the Poor in Years ended 25th March	Ireland	Local Government Board, Dublin.
Lunatics	Annual Reports of Number of Lunatics in Confinement, &c., in Years ended 31st December	England and Wales	Commissioners in Lunacy, London.
	Annual Reports of Number of Lunatics in Confinement, &c., in Years ended 31st December	Scotland................	General Board of Commissioners in Lunacy, Edinburgh.
	Annual Reports of the Number of Lunatics in Confinement in Years ended 31st December	Ireland	Office of Inspectors of Lunatic Asylums, Dublin.

Note.—The Commissioners in Lunacy for England and Wales act under the Lord High Chancellor; the Board of Commissioners in Lunacy in Scotland under the Secretary of State for the Home Department; and the Inspectors of Lunatic Asylums for Ireland under the Lord-Lieutenant of Ireland.

Classified List of the Principal Statistical Returns—Contd.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Crime and Civil Justice.	Annual Reports on Prisons in Years ended 29th September	England and Wales	Home Office, London.
	Annual Reports on Convict Prisons in Years ended 31st March	England and Wales	Office of Directors of Convict Prisons London.
	Annual Reports on Reformatories in Years ended 31st September	Great Britain	Home Office, London.
	Annual Reports on Industrial Schools in Years ended 31st December	,,	Home Office, London.
	Annual Reports on Judicial Statistics in the Years ended 29th September	England and Wales	Home Office, London.
	Annual Reports on Prisons and Judicial Statistics in Years ended 31st December	Scotland................	Board of Prisons and Judicial Statistics, Edinburgh.
	Annual Reports on Prisons in Years ended 31st December	Ireland	Office of Inspectors-General of Prisons, Dublin.
	Annual Reports on Convict Prisons in the Years ended 31st December	,, ...	Office of Government Prisons, Dublin.
	Annual Reports on Judicial Statistics in Years ended 31st December	,, ...	Statistics Office, Dublin.
	Annual Reports on Reformatories and Industrial Schools, in Years ended 31st December	,, ...	,,
	Annual Report of Metropolitan Police	London	Office of Commissioner of Police, London.
Emigration	Annual Reports of the Number of Emigrants, &c., in Years ended 31st December	United Kingdom	Board of Trade, London (Marine Department).
Education .	Annual Reports on Results of Inspection of Primary Schools, in Years ended 31st August, and of Schools of Science and Art, in Years ended 31st December	Great Britain (showing for each division) United Kingdom	Committee of Council on Education, London. Science and Art Department, London.
	Annual Reports on Primary Education, in Years ended 31st Dec.	Ireland	Commissioners of Education, Dublin.

Note.—The Committee of Council on Education acts under the Privy Council, and the Commissioners of Education under the Lord-Lieutenant of Ireland.

Classified List of the Principal Statistical Returns—Contd.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Finance	Annual Returns of Public Revenue, Expenditure, and Debt, in Years ended 31st March	United Kingdom	The Treasury, London.
	Annual Report on Customs Department, in Years ended 31st December	„	Board of Customs, London.
	Annual Report on Inland Revenue Department (Excise Stamps and Taxes), in Years ended 31st March	„	Inland Revenue Department, London.
	Annual Report on Post Office, in Years ended 31st December, and Telegraph Departments, in Years ended 31st March	„	Post Office, London.

Note.—The Board of Customs, the Inland Revenue Department, and the Post Office, act under the direction of the Treasury.

Local Taxation	Annual Reports on Receipts and Expenditure, &c., in Years ended at various dates	England and Wales	Local Government Board, London.
	County Rates, in Years ended 29th September	England and Wales	Local Government Board, London.
	Returns of Receipts and Expenditure of Local Boards, in Years ended 29th September	England and Wales	Local Government Board, London.
	Municipal Boroughs, Receipts and Expenditure of, in Year ended 31st August	England and Wales	Local Government Board, London.
	Annual Reports on Receipts and Expenditure, in Years ended at various dates	Ireland	Statistics Office, Dublin.
	Highways, Returns of Receipts and Expenditure on account of, in Years ended 31st March and 31st December	England and Wales	Local Government Board, London.
	Turnpike Trusts, Receipts and Expenditure of, in Years ended 31st December	England and Wales	Local Government Board, London.
	Turnpike Trusts, Receipts and Expenditure of, in Years ended 14th May	Scotland................	Home Office, London.

Note.—There are no annual returns of local taxation for Scotland.

Classified List of the Principal Statistical Returns—Contd.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
National Debt	Annual Report on the Funded and Unfunded Debt, in Years ended 31st March and 31st December	United Kingdom	National Debt Office, London.

Note.—The National Debt Office acts under the Treasury. The returns of the department are published in the Finance Accounts issued by the Treasury and in the "Miscellaneous Statistics" issued by the Board of Trade.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Banks	Annual Returns of Joint Stock and Private Banks, Years ended 31st December	United Kingdom (showing for each Division)	Inland Revenue Department, London.
	Annual Returns of Bank of England.	England and Wales	Bank of England, London.

Note.—These returns are published in the volume of "Miscellaneous "Statistics" issued by the Board of Trade.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Savings Banks	Annual Returns of Savings Banks, in Years ended 20th November	United Kingdom (showing for each Division)	National Debt Office, London.
	Annual Reports on Post Office Savings Banks, Years ended 31st December	United Kingdom	Post Office, London.
Coinage	Annual Returns of Monies Coined, in Years ended 31st December	United Kingdom	The Royal Mint, London.

Note.—The Royal Mint acts under the direction of the Treasury.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Railways	Annual Returns of Capital, Traffic, &c.	United Kingdom (showing for each Division)	Board of Trade, London (Statistical Department)
	Accidents, &c., in Year ended 31st December	United Kingdom (showing for each Division)	Board of Trade, London (Railway Department)

Classified List of the Principal Statistical Returns—Contd.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Agriculture	Annual Reports on Acreage under Crops, &c., and Number of Live Stock on 25th June in each year	Great Britain (showing for each Division)	Board of Trade, London (Statistical Department).
	Annual Reports on Agriculture and Live Stock in June—July in each year	Ireland	General Registry Office, Dublin.
Factories and Workshops	Periodical Returns of Factories and Workshops and Employment of Operatives	United Kingdom (showing for each Division)	Office of Inspector of Factories, London.
	Annual Returns of Accidents in Factories, &c., in Years ended 31st October	United Kingdom (showing for each Division)	Office of Inspectors of Factories, London.

Note.—The Office of Inspectors of Factories acts under the direction of the Secretary of State for the Home Department.

Mines	Annual Reports on the Production of Coal and Minerals, in Years ended 31st December	United Kingdom (showing for each Division)	Mining Record Office, London.
	Annual Reports of Accidents in Coal and Ironstone Mines, in Years ended 31st December	Great Britain	Home Office, London.

Note.—The Mining Record Office acts under the direction of the Committee of Council on Education.

Trade and Shipping	Annual Statement of the Trade of the Kingdom, in Years ended 31st December	United Kingdom	Board of Customs, London (Statistical Department)
	Monthly Returns of Trade	"	Board of Customs, London (Statistical Department).
	Annual Statement of Navigation and Shipping, in Years ended 31st Dec.	"	Office of Registrar-General of Shipping and Seamen, London
	Monthly Returns of Shipping	"	Office of Registrar-General of Shipping and Seamen, London
	Annual Return of Progress of British Merchant Shipping in Years ended 31st December	"	Board of Trade, London (Marine Department).

Note.—The "Trade Returns" are prepared under the direction of the Board of Trade. The Office of the Registrar-General of Shipping and Seamen is a branch of the Board of Trade.

Classified List of the Principal Statistical Returns—Contd.

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
Wrecks	Annual Report on Casualties to Shipping, in Years ended 30th June	United Kingdom	Board of Trade, London (Marine Department).
Life Insurance	Annual Report on Life Insurance Companies, in Years ended at various dates	„	Board of Trade, London (Finance Department).
Gas (Metropolis)	Accounts of Metropolitan Gas Companies, in Years ended 31st December	London	Board of Trade, London (Railway Department).
Water (Metropolis)	Accounts of Metropolitan Water Companies, in Years ended at various dates.	„	Local Government Board, London.
Army	General Annual Return, with Abstracts for twelve years	British Empire (showing for each part)	War Office, London (Horse Guards).
Post Office	Annual Returns of Letters, &c., conveyed, and of Money Orders issued and paid, in Years ended 31st December	United Kingdom (showing for each division)	Post Office, London.
Telegraphs	Annual Returns of, in Years ended 31st December	United Kingdom	„

Statistical Department, Board of Trade, London.

The functions of this department differ, to some extent from those of the other departments above-mentioned. The department is charged not only with the preparation of certain branches of statistics, such as those relating to railways and agriculture, as described in the foregoing list, but also with the preparation of abstracts, in a comparative form, of the statistics of the other State departments of the kingdom, as well as of those published by the colonies and by foreign countries. The department also has charge of foreign customs tariffs, and issues comparative returns of the rates of duty levied upon the principal articles of commerce in the chief foreign countries. These various publications appear under the following titles:—

Subjects.	Returns Issued.	Divisions of Kingdom.	Names of Departments which Publish the Returns.
General Statistics	Statistical Abstract for the United Kingdom (annually)	—	Board of Trade, London (Statistical Department).
	Statistical Abstract for the Colonies (annually)	—	„
	Statistical Abstract for Foreign Countries (annually)	—	„
	Miscellaneous Statistics, once in three years	—	„
	Colonial Statistics, once in three years	—	„
	Foreign Statistics, once in three years	—	„
	Import Duties in Foreign Countries (in parts annually)	—	„
	Also the two statistical works alluded to in the foregoing list, viz.:—		
	Agricultural Returns on 25th June in each year	Great Britain	„
	Railway Returns, in Years ended 31st December	United Kingdom (showing for each Division)	„

Foreign Office.

The Foreign Office annually presents to Parliament reports from the secretaries of embassies and legations, and from British consuls abroad. These reports contain a good deal of statistical information.

Colonial Office.

The Colonial Office annually presents to Parliament reports from the governors of the British colonies, on the condition of the several colonies; usually including a précis of the statistics of the colonial blue books, which are annually transmitted to the Colonial Office: an abstract of which is published by the statistical department of the Board of Trade as already stated.

India Office.

An abstract of the statistics of British India is annually published by the department of statistics and commerce of the India Office. The India Office also issues returns of Indian finance, railways, and an annual statement of the moral and material progress and condition of India, which contains a certain amount of statistical information.

We have received from Mr. J. Boothby (Under Secretary and Government Statist of South Australia), a very full report of the statistics of our Australasian Colonies brought up to the end of the year 1873. It was ordered by the House of Assembly to be printed, 23rd September, 1874. We have rearranged the columns and modified the headings, but have left the figures intact.

The Relative Positions and Aggregate Importance of the Australasian Colonies at the Close of 1873.

(Prepared by the New South Wales Government from Returns furnished by the Government Statists of the several colonies.)

[000's omitted in Cols. 2 to 7 and 12 to 17.]

1	2	3	4	5	6	7	8	9	10	11	12
Colony.	Estimated Population at close of 1873.	Acres under Cultivation.	Number, in 1873, of				Miles of Railway, 31st Dec., 1873.		Miles of Telegraph, 31st Dec., 1873		Revenue of 1873.
			Horses.	Cattle.	Sheep.	Pigs.	Open.	In Course of Construction.	Open.	In Course of Construction.	
											£
Victoria	790,	965,	180,	884,	11,323,	160,	458	145	3,870	210	3,944,
New South Wales	560,	457,	328,	2,710,	19,929,	238,	401	58	6,521	912½	3,325,
South Australia	198,	1,225,	87,	174,	5,617,	87,	202	148	3,807	65	938,
Queensland	147,	‖62,	‖93,	‖1,201,	‖6,688,	‖36,	218	144	3,059	330	1,120,
Tasmania	104,	324,	23,	106,	1,491,	60,	45	121	291	—	294,
Western Australia	26,	52,	26,	48,	749,	21,	40	85	900	—	135,
Total, Australian Colonies	1,826,	3,085,	738,	5,123,	45,796	602,	1,364	651	18,448	1,517½	9,756,
		1872.	Number in February, 1871.								30 Jne. 1874.
New Zealand§	310,	1,226,	81,	437,	9,701,	151,	—	—	—	—	1,420,
Total, Australasian Colonies	2,136,	4,311,	819,	5,560,	55,497,	754,	—	—	—	—	11,175,

1	13	14	15	16	17	18	19	20	21	22
Colony.	Proportion raised by Taxation.*	Public Debt, 31st Dec., 1873.	Value, for 1873, of		Total Value of Imports and Exports.	Rate per Head of Population of		Value, per Head of Population, of		
			Imports.	Exports.		Taxation.	Indebtedness.	Imports.	Exports.	Imports and Exports.
	£	£	£	£	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Victoria	1,778,	12,446,	16,534,	15,302,	31,836,	2 4 10¾	15 14 10¼	20 18 3¾	19 7 2	40 5 5¾
New South Wales	1,883,	10,842,	†11,088,	‡11,816,	22,904,	2 9 4	19 7 0	19 15 10	21 1 0	40 16 10
South Australia	362,	2,175,	3,830,	4,588,	8,418,	1 16 7	10 19 5	19 6 4	23 2 10	42 9 2
Queensland	588,	4,787,	2,882,	3,543,	6,424,	4 0 2¼	32 12 7¾	19 12 2	24 2 11	43 15 10
Tasmania	211,	1,478,	1,107,	894,	2,001,	2 0 6½	14 3 6¾	10 12 5½	8 11 5¼	19 3 11½
Western Australia	81,	35,	297,	265,	563,	3 2 7	1 7 2¼	11 10 10	10 5 10¼	21 16 8¾
Total, Australian Colonies	4,403,	31,762,	35,738,	36,407,	72,146,	2 8 2	17 7 11	19 11 6	19 18 10	39 10 4
	30th June, 1874.									
New Zealand§	1,224,	12,510,	7,241,	5,522,	12,763,	3 18 10½	40 5 11	23 6 6	17 1 8¾	40 8 2¾
Total, Australasian Colonies	5,627,	44,272	42,979,	41,929,	84,909,	2 12 7	20 14 6	20 2 6¾	19 12 6¾	39 15 1¼

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* From the items under this head, railway, telegraph, and postal receipts, as well as land sales, rents, and all similar receipts not strictly coming under the head of taxation, have been excluded.

† Includes 616,905*l.* imports *vid* and across the River Murray, during 1872, as no returns could be obtained for 1873.

‡ Includes 2,427,956*l.* exports " " "

‖ For 1872—information for 1873 not being ready.

§ The information asked for from New Zealand not having been supplied, the figures inserted in the return have been taken from the tables attached to Mr. Vogel's financial statement of 21st July, 1874, and the published agricultural statistics of the colony.

Population of England and Wales and of the United Kingdom (Exclusive of the Population in the Islands in the British Seas, and of the Portions of the Army, Navy, and Merchant Seamen Abroad), Estimated to the Middle of each of the Years comprised in the Table.

Years.	England and Wales.			United Kingdom.
	Persons.	Males.	Females.	Persons.
1801*........	9,060,993	4,404,490	4,656,503	15,902,322
1811*........	10,322,592	5,025,212	5,297,380	18,103,492
1821*........	12,105,614	5,946,821	6,158,793	21,007,386
'22	12,320,360	6,050,929	6,269,431	21,338,890
'23	12,529,518	6,153,157	6,376,361	21,666,344
'24	12,720,736	6,246,003	6,474,733	21,977,412
'25	12,903,059	6,333,955	6,569,104	22,281,164
'26	13,074,286	6,417,196	6,657,090	22,575,495
'27	13,247,277	6,500,546	6,746,731	22,872,049
'28	13,438,474	6,591,959	6,846,515	23,190,529
'29	13,625,045	6,681,424	6,943,621	23,504,943
'30	13,805,041	6,767,221	7,037,820	23,814,667
1831*........	13,994,460	6,859,085	7,135,375	24,135,422
'32	14,164,696	6,943,932	7,220,764	24,372,051
'33	14,328,471	7,023,322	7,305,149	24,602,698
'34	14,520,297	7,116,031	7,404,266	24,861,899
'35	14,724,063	7,213,625	7,510,438	25,133,468
'36	14,928,477	7,310,074	7,618,403	25,406,281
'37	15,103,778	7,392,191	7,711,587	25,650,426
'38	15,287,699	7,479,021	7,808,678	25,903,697
'39	15,514,255	7,586,593	7,927,662	26,200,106
'40	15,730,813	7,689,301	8,041,512	26,487,026
1841*........	15,929,492	7,784,883	8,144,609	26,751,199
'42	16,130,326	7,887,620	8,242,706	27,004,417
'43	16,332,228	7,990,370	8,341,858	27,255,699
'44	16,535,174	8,093,100	8,442,074	27,525,119
'45	16,739,136	8,195,776	8,543,360	27,776,364
'46	16,944,092	8,298,360	8,645,732	28,002,094
'47	17,150,018	8,400,820	8,749,198	27,972,537
'48	17,356,882	8,503,116	8,853,766	27,820,088
'49	17,564,656	8,605,212	8,959,444	27,669,579
'50	17,773,324	8,707,074	9,066,250	27,523,694
1851*........	17,982,849	8,808,662	9,174,187	27,393,337
'52	18,193,206	8,909,938	9,283,268	27,448,257
'53	18,404,368	9,010,866	9,393,502	27,542,588
'54	18,616,310	9,111,410	9,504,900	27,658,704
'55	18,829,000	9,211,528	9,617,472	27,821,730
'56	19,042,412	9,311,182	9,731,230	28,011,034
'57	19,256,516	9,410,334	9,846,182	28,188,280
'58	19,471,291	9,508,949	9,962,342	28,389,770
'59	19,686,701	9,606,982	10,079,719	28,590,224
'60	19,902,713	9,704,394	10,198,319	28,778,411
1861*........	20,119,314	9,801,152	10,318,162	28,977,133
'62	20,371,013	9,923,272	10,447,741	29,243,440
'63	20,625,855	10,046,909	10,578,946	29,470,489
'64	20,883,889	10,172,089	10,711,800	29,679,567
'65	21,145,151	10,298,826	10,846,325	29,924,044
'66	21,409,684	10,427,146	10,982,538	30,146,285
'67	21,677,525	10,557,066	11,120,459	30,407,422
'68	21,948,713	10,688,600	11,260,113	30,688,092
'69	22,223,299	10,821,775	11,401,524	30,976,223
'70	22,501,316	10,956,608	11,544,708	31,254,193
1871*........	22,782,812	11,093,123	11,689,689	31,541,347
'72	23,067,835	11,231,339	11,836,496	31,835,227
'73	23,356,414	11,371,273	11,985,141	32,131,488

* Census years.

TABLES *of* EQUIVALENTS *of* IMPERIAL *and* METRIC MEASURES *and* WEIGHTS, *abridged from* APPENDIX VII *to the* SECOND REPORT *of the* STANDARDS COMMISSION.

A.—*Metric Measures and Weights, with their Equivalents in Imperial Weights and Measures.*

1. MEASURES OF LENGTH.

Metric Denominations and Values.	Equivalents in Imperial Denominations.
$\frac{1}{1000}$ of a metre or 1 millimetre	0·039 of an inch
$\frac{1}{100}$ „ 1 centimetre	0·394 „
$\frac{1}{10}$ „ 1 decimetre	3·937 inches
1 metre	39·371 „ or 1·094 yard
10 metres or 1 dekametre	10·94 yards
100 „ 1 hectometre	109·36 „
1,000 „ 1 kilometre	1093·6 „ or 0·6214 of a mile
10,000 „ 1 myriametre	6·2138 miles

2. SQUARE MEASURES OR MEASURES OF SURFACE.

1 square centimetre	0·155 of a square inch
1 „ decimetre	15·5 square inches
1 „ metre	10·76 „ feet or 1·196 „ yard
100 „ metres or 1 are	119·603 „ yards
10,000 „ metres or 100 ares — or 1 hectare	11960·33 „ „ or 2·471 acres

3. CUBIC MEASURE.

1 cubic centimetre	0·061 of a cubic inch
1 „ decimetre	61·027 cubic inches
1 „ metre	35·371 „ feet or 1·308 „ yard

A.—*Metric Measures and Weights, with their Equivalents in Imperial Weights, &c.—Contd.*

4. Measures of Capacity.

Metric Denominations and Values.	Equivalents in Imperial Denominations.
$\frac{1}{100}$ of a litre, or 1 centilitre	0·07 of a gill 0·0176 „ pint
$\frac{1}{10}$ „ 1 decilitre................	0·704 „ gill 0·176 „ pint
1 litre	1·761 (pint) 0·881 of a quart
10 litres, or 1 dekalitre	2·202 gallons 0·275 of a bushel
100 „ 1 hectolitre	22·024 gallons 2·753 bushels
1,000 „ 1 kilolitre	3·441 quarters

5. Metric Weights to Avoirdupois.

$\frac{1}{1000}$ of a gram, or 1 milligram	0·0154 of a grain
$\frac{1}{100}$ „ 1 centigram	0·1543 „
$\frac{1}{10}$ „ 1 decigram	1·543 grains
1 gram	15·432 „
10 grams, or 1 decagram........	154·32 „ or 0·353 of an oz.
100 „ 1 hectogram	3·527 ozs.
1,000 „ 1 kilogram	2·205 lbs.
10,000 „ 1 myriagram	22·046 „
100,000 „ 1 quintal	220·46 „ or 1·968 cwt.
1,000,000 „ 1 millier, or ton	2204·6 lbs. or 0·984 of a ton

6. Metric Weights to Troy.

$\frac{1}{1000}$ of a gram, or 1 milligram	0·0154 of a grain
$\frac{1}{100}$ „ 1 centigram............	0·154 „
$\frac{1}{10}$ „ 1 decigram	1·543 grains
1 gram	15·432 „
10 grams, or 1 dekagram	0·643 of a dwt. or 0·321 of an oz.
100 „ 1 hectogram	3·215 ozs.
1,000 „ 1 kilogram	32·15 „ or 2·679 lbs.

B.—*Imperial Measures and Weights, with their Equivalents in the Metric System.*

1. MEASURES OF LENGTH.

Imperial Denominations.	Equivalents in Metric Denominations.
1 inch	25·40 millimetres
12 inches or 1 foot	3·048 decimetres or 0·3048 of a metre
3 feet „ 1 yard	0·914 „
2 yards „ 1 fathom	1·829 metres
5½ „ „ 1 pole	5·029 „
4 poles „ 1 chain	20·116 „
40 „ „ 1 furlong	201·16 „ or 0·201 of a kilometre
8 furlongs or 1 mile	1·609 kilometre

2. SQUARE MEASURES OR MEASURES OF SURFACE.

1 square inch	0·0645 of a square decimetre
144 square inches or 1 „ foot	9·29 square decimetres
9 „ feet „ 1 „ yard	0·836 of a square metre
30¼ „ yards „ 1 perch or rod	25·29 square metres
40 perches „ 1 rood	10·117 ares
4 roods „ 1 acre	0·4047 of a hectare
640 acres „ 1 square mile	258·989 hectares

3. CUBIC MEASURE.

1 cubic inch	16·386 cubic centimetres
1,728 „ inches or 1 cubic foot	28·315 „ decimetres
9 „ feet „ 1 „ yard	0·7645 of a cubic metre

4. MEASURES OF CAPACITY.

1 gill	1·419 decilitres
4 gills or 1 pint	0·567 of a litre
2 pints „ 1 quart	1·135 litres
4 quarts „ 1 gallon	4·540 „
2 gallons „ 1 peck	9·081 „
8 „ „ 1 bushel	3·632 dekalitres
8 bushels „ 1 quarter	2·906 hectolitres

B.—*Imperial Measures and Weights with their Equivalents—Contd.*

5. AVOIRDUPOIS WEIGHTS TO METRIC.

Imperial Denominations.		Equivalents in Metric Denominations.
	1 dram	1·77 grams
16 drams or	1 ounce	28·349 „
16 ounces or 7,000 grains or	1 pound	453·59 „ or 0·453 of a kilogram
112 pounds or	1 hundredweight	50·8 kilograms
20 hundredweights or	1 ton....................	1016·0 „ or 1·016 millier or metric ton

6. TROY WEIGHTS TO METRIC.

	1 grain....	64·799 milligrams
24 grains or	1 dwt.	1·555 grams
480 „ or 20 penny-weights (dwts.), or	1 oz.	31·103 „
12 ounces or 5,760 grains „	1 pound	0·373 of a kilogram

(Corrected to December, 1874)

STATISTICAL SOCIETY,

(FOUNDED 1834,)

SOMERSET HOUSE TERRACE, STRAND, LONDON, W.C.

(KING'S COLLEGE ENTRANCE.)

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STATISTICAL SOCIETY.

Honorary President.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.

COUNCIL AND OFFICERS.—1874-75.

Honorary Vice-Presidents.

(having filled the Office of President).

The Right Honourable The Earl of Shaftesbury, K.G., D.C.L.
The Right Honourable The Earl of Harrowby, K.G., D.C.L.
The Right Honourable Lord Overstone, M.A., F.R.G.S.
The Right Honourable The Earl of Derby, D.C.L., F.R.S.
The Right Honourable Earl Russell, K.G., G.C.M.G.
The Right Honourable Lord Hampton, G.C.B.
The Right Honourable Lord Houghton, D.C.L., F.R.S.
The Right Honourable William Ewart Gladstone, M.P., D.C.L.
William Newmarch, F.R.S., F.I.A.
William Farr, M.D., D.C.L., F.R.S.

President.

WILLIAM AUGUSTUS GUY, M.B., F.R.S.

Vice-Presidents.

Samuel Brown, F.I.A.
James Heywood, M.A., F.R.S.
William Golden Lumley, Q.C., LL.M.
The Right Hon. Earl Stanhope, F.R.S.

Trustees.

James Heywood, M.A., F.R.S.
Sir John Lubbock, Bart., M.P., F.R.S.
William Newmarch, F.R.S., F.I.A.

Treasurer.

James Thomas Hammick.

Council.

The Rt. Hon. The Earl of Airlie, K.T.
Sir James Anderson, F.R.G.S., F.G.S.
General Sir George Balfour, M.P.
Henry G. Bohn, F.R.A.S., F.L.S.
Thomas Brassey, M.P.
Samuel Brown, F.I.A.
Edwin Chadwick, C.B.
Hammond Chubb, B.A.
Hyde Clarke, D.C.L.
Professor Leonard H. Courtney, M.A.
Francis Galton, F.R.S., F.R.G.S.
Robert Giffen.
James Thomas Hammick.
Frederick Hendriks.
James Heywood, M.A., F.R.S.
Frederick Hasley Janson, F.L.S.
Henry Jeula, F.R.G.S.
Francis Jourdan.
H. Reader Lack.
Professor Leone Levi, F.S.A.
William Golden Lumley, Q.C., LL.M.
R. Biddulph Martin, M.A.
Frederic John Mouat, M.D., F.R.C.S.
Robert Hogarth Patterson.
Frederick Purdy.
Ernest Seyd.
Thomas Sopwith, M.A., F.R.S.
The Right Hon. Earl Stanhope, F.R.S.
Gen. Richard Strachey, R.E., F.R.S.
William Tayler, F.S.A.

Secretaries.

Frederic J. Mouat, M.D.
Robert Giffen.
H. Reader Lack.

Foreign Secretary.

Frederic J. Mouat, M.D., F.R.C.S.

Assistant Secretary.

Joseph Whittall.

LIST OF FELLOWS.

*Those marked thus * have compounded for their Annual Subscriptions.*

The names of Members of Council are printed in SMALL CAPITALS.

Year of Election.	
1870	Absolon, Eugene, 24, *Royal Avenue, King's-road, Chelsea, S.W.*
1862	Acland, Henry Wentworth, M.D., F.R.S., *Oxford.*
1869	Acland, Sir Thomas Dyke, Bart., M.P., F.R.S., *Sprydoncote, Exeter; and Athenæum Club, S.W.*
1861	Adams, Arthur Robarts, D.C.L., *St. John's College, Oxford.*
1867	Addison, John, 6, *Delahay-street, Great George-street, S.W.*
1864	Adler, Marcus Nathan, M.A., F.I.A., 1, *Bartholomew-lane, E.C.*
1873	*AIRLIE, THE RIGHT HON. THE EARL OF, K.T., *Airlie Lodge, Camden Hill, W.*
1841	Aldam, William, F.R.S., *Frickley Hall, Doncaster.*
1872	Aldridge, James, 3, *Queen's-terrace, Southampton.*
1847	Alexander, George William, 30, *Lombard-street, E.C.*
1872	Alexander, Robert Henry, 30, *Lombard-street, E.C.*
1871	Allport, James Joseph, *Littleover, near Derby.*
1873	Anderson. Sir Henry Lacon, K.C.S.I., F.R.G.S., *India Office, S.W.*
1871	ANDERSON, SIR JAMES, F.R.G.S., F.G.S., 66, *Old Broad-street, E.C.*
1871	Angus, R. B., *Montreal, Canada.*
1834	*Ansell, Charles, F.R.S., 92, *Cheapside, E.C.*
1874	Appleton, Charles Edward, C.B., D.C.L., *Netley Cottage, Hampstead, N.W.*

Year of Election

1872 *Archibald, W. F. A., M.A.,
3, Amersham-road, Putney, S.W.

1874 Arlidge, John Thomas, M.D., F.R.C.P.
Newcastle, Staffordshire.

1873 Artingstall, George, F.R.G.S.,
Latchford House, Warrington.

1874 Ashwell, The Rev Canon, M.A.,
Chichester.

1854 Ashworth, Henry,
The Oaks, Bolton, Lancashire.

1871 Atkinson, George W.,
Barnsley.

1870 Avery, Thomas,
Church-road, Edgbaston, Birmingham.

1871 Axon, William E. A.,
4, Victoria-terrace, Rusholme, Manchester.

1872 *Babbage, Colonel Henry P.,
Bromley, Kent.

1872 *Backhouse, Edmund, M.P.,
Middleton Lodge, Richmond, York.; Reform Club, S.W.

1873 Badenoch, Rev. G. R.,
3, Pagoda Villas, Lee, S.E.

1864 Bagehot, Walter, M.A.,
340, Strand, W.C.

1855 Bailey, Arthur Hutcheson, F.I.A.,
7, Royal Exchange, E.C.

1873 Bain, William P., M.D.,
15, Brunswick-street, Blackwall, E.

1858 Baines, Edward,
St. Ann's-hill, Burley, Leeds.

1874 Baker, General Sir William Erskine, K.C.B.,
India Office, S.W.

1848 **BALFOUR, GENERAL SIR GEORGE**, M.P., K.C.B., F.R.G.S.,
6, Cleveland-gardens, Bayswater, S.W.

1873 Balfour, Jabez Spencer,
48, King William-street, E.C.

1865 Balfour, Thomas Graham, M.D., F.R.S.,
Surgeon-General, Gibraltar.

1849 Bampton, James,
13, St. James's-square, S.W.

1865 Bannerman, John Barclay, F.I.A.,
25, Finsbury-place, E.C.

1873 Barham, Francis F.,
Bank of England, Manchester

Year of Election.	
1872	*Bass, Michael Arthur, M.P., 101, *Eaton-square, S.W.; Rangemore, Burton-on-Trent.*
1836	Bass, Michael Thomas, M.P., 101, *Eaton-square, S.W.; Rangemore. Burton-on-Trent.*
1873	Bates, George, *Leeds.*
1860	Baxter, Robert Dudley, M.A., 6, *Victoria-street, Westminster, S.W.*
1873	*Baynes, Alfred Henry, F.R.G.S., 19, *Castle-street, Holborn, E.C.*
1871	*Baynes, William Wilberforce, 48, *Moorgate-street, E.C.*
1873	Beaumont, Wentworth Blackett, M.P., F.R.G.S., 144, *Piccadilly, W.*
1872	Beddoe, John, M.D., 2, *Lansdowne-place, Clifton.*
1863	*Bedford, His Grace, the Duke of, *Woburn Abbey, Oakley, Bedford.*
1871	*Beer, Julius Paul, 23, *Park-crescent, W.*
1873	Bellows, John, *Eastgate, Gloucester.*
1834	Belper, The Right Honourable Lord, P.C., F.R.S., 88, *Eaton-square, S.W.*
1856	*Beresford-Hope, Alexander James Beresford, M.P., F.R.G.S., 1, *Connaught-place, W.*
1869	*Beverley, Henry, *United Service Club, Calcutta.*
1869	Beyts, Hon. Henry Nicholas Duverger, *Port Louis, Mauritius.*
1866	Bikélas, Démétrius, 11, *Dawson-place, Pembridge-square, W.*
1836	Blake, William John, F.R.S., F.G.S., 25, *Portland-place, W.*
1864	Blakely, Edward T., *Statistical Department, Board of Trade, S.W.*
1874	Blyth, James Nisbet, 28, *Highbury-place, N.*
1873	Bogie, James, *London and Yorkshire Bank Limited, Sheffield.*
1860	BOHN, HENRY GEORGE, F.R.A.S., F.L.S., 18, *Henrietta-street, Covent Garden, W.C.; Twickenham.*
1854	Boult, Swinton, 1, *Dale-street, Liverpool.*
1871	Bourne, Stephen, *Statistical Office, H.M. Custom House, E.C.*
1860	Bovill, William John, Q.C., 22, *James-street. Buckingham-gate, S.W.*
1851	Bowman, John, F.R.G.S., 9, *King William-street, City. E.C.*

Year of Election.	
1874	Brabrook, Edward William, F.S.A., M.R.S.L., 28, *Abingdon-street, S.W.*
1874	Bramley-Moore, John, D.L., J.P., *Gerrard's-cross, Bucks.*
1855	Brand, The Right Hon. Henry Bouverie William, M.P., *Speaker's Court, House of Commons, S.W.*
1873	BRASSEY, THOMAS, M.P., 24, *Park-lane, W.*
1867	Bremner, John A., *Hilton House, Prestwich, Manchester.*
1874	Brewer, John, 6, *Victoria-street, S.W.*
1856	Briggs, General John, F.R.S., F.G.S., 2, *Tenterden-street, Hanover-square, W.*
1873	Briggs, Thomas, *Holmstead, Richmond, Surrey.*
1872	Brind, Frederick William, *Bickley, Kent.*
1844	Bristow, Alfred Rhodes, 39, *Parliament-street, S.W.*
1873	Brogden, Alexander, M.P., 51, *Prince's Gate, S.W.*
1874	Broom, Andrew, 10, *Chancellor-road, West Dulwich, S.E.*
1872	Brown, James Bryce, 90, *Cannon-street, E.C.*
1837	*BROWN, SAMUEL, F.I.A. (*Vice-President*), 11, *Lombard-street, E.C.*
1866	Brown, Thomas, jun., 135, *Buchanan-street, Glasgow.*
1873	Browne, Edward W., 13, *Queen-street, Edinburgh.*
1873	Browning, Arthur Giraud, 17, *Albert Mansions, Victoria-street, S.W.*
1872	Buckley, Nathaniel, *Reform Club, S.W.*
1865	Bunce, John Thackray, "*Daily Post*" *Office, Birmingham.*
1873	*Burdett-Coutts, The Right Hon. the Baroness, 1, *Stratton-street, Piccadilly, W.; and Holly Lodge, Highgate, N.*
1863	Burnett, Alexander Smith, F.I.A., *Bridge Town, Barbados, West Indies.*
1872	Burns, The Rev. Dawson, M.A., 52, *Parliament-street, S.W.*
1873	Burns, John J. D., M.D., R.N., *The Convict Prison, Chatham.*
1874	Burr, William, 42, *Poultry, E.C.*
1873	Burrow, Robert Foster, 25, *Finsbury-place, E.C.*

Year of Election.	
1868	Burton, Samuel Warren, *The Hermitage, Tunbridge, Kent.*
1871	Byrne, William Alfred, 75, *Lancaster-road, Notting-hill, W.*
1857	Caird, James, C.B., 3, *St. James's-square, S.W.; and Cassencarie, Kirkcudbrightshire.*
1874	Campbell, Sir George, D.C.L., K.C.S.I., 60, *St. George's-square, S.W.; and The India Office, S.W.*
1862	Cape, George A., 8, *Old Jewry, E.C.*
1872	Carillon, J. Wilson, F.S.A., F.R.G.S., *Wormhill, Buxton.*
1871	Carnac, Harry Rivett-, *Calcutta, India.*
1867	Carrias, Victoriano, 128, *Albany-street, Regent's Park, N.W.*
1862	Carter, Henry Bonham, 11, *Lombard-street, E.C.*
1848	Carter, John Bonham, 25, *Ashley-place, Victoria-street, S.W.*
1874	Carter, Wm. Allan, C.E., F.G.S.E., 5, *St. Andrew's-square, Edinburgh.*
1874	Cave, Laurence Trent, 75, *Chester-square, S.W.*
1858	Chadwick, David, M.P., 27, *Belsize-park, N.W.*
1834	**CHADWICK, EDWIN**, C.B., *Park Cottage, East Sheen, Mortlake, S.W.*
1869	Chadwick, John Oldfield, 65, *Moorgate-street, E.C.*
1873	Charlesworth, Frederic, *Widmore, Bromley, Kent.*
1863	Charlton, W. H., *Hesleyside, near Hexham, Northumberland.*
1873	Charrington, Thomas, *Mayfield, Chislehurst, Kent.*
1862	Cheetham, John, *Eastwood, Stalybridge.*
1851	*Cheshire, Edward, 26, *Old Broad-street, E.C.; and Conservative Club, S.W.*
1874	Chinery, David, F.R.G.S.; F.S.A., *Willesden, Middlesex, N.W.*
1853	Chisholm, David, F.I.A., 64, *Princes-street, Edinburgh.*

Year of Election	
1862	Christie, Richard Copley, M.A., 2, *St. James's-square, Manchester.*
1869	CHUBB, HAMMOND, B.A., *Bickley, Kent.*
1856	Clark, Sir John Forbes, Bart., *Tilliepronie, Tarland, Aberdeenshire.*
1849	Clark, Gordon Wyatt, 72, *Gt. Tower-street, E.C.; and Meckleham Hall, Dorking*
1856	*CLARKE, HYDE, D.C.L., 32, *St. George's-square, S.W.*
1871	Clarke, Ebenezer, jun., 52, *Cannon-street, E.C.*
1850	Cleghorn, John, 3, *Spring-gardens, S.W.*
1853	*Cleveland, His Grace the Duke of, K.G., 17, *St. James's-square, S.W.*
1845	Clirehugh, William Palin, F.I.A., 158, *Leadenhall-street, E.C.*
1838	Cobb, Timothy Rhodes, *Banbury.*
1873	Cockle, Captain George, F.R.G.S., 9, *Bolton-gardens, South Kensington, S.W.*
1859	Colebrooke, Sir Thomas Edward, Bart., M.P., 37, *South-street, W.*
1867	Coles, John, F.I.A., 39, *Throgmorton-street, E.C.*
1874	Collins, Eugene, M.P., 38, *Porchester-terrace, W.*
1874	Collinson, Henry, F.L.S., F.R.G.S., 7, *Devonshire-place, Portland-place, W.*
1874	Collinson, John, F.R.G.S., 37, *Porchester-terrace, W.*
1843	Colman, Jeremiah James, M.P., *Carrow House, Norwich.*
1874	*Cookson, Faithful, Esq., F.R.G.S., *Teddington Hall, Middlesex.*
1867	*Copperthwaite, Charles William, *New Malton, Yorkshire.*
1874	Corbett, John, M.P., *Impney, Droitwich.*
1873	Cork, Nathaniel, F.R.G.S., 39, *Lombard-street, E.C.*
1866	Cotton, Francis Lovett, *Baltic Chambers,* 108, *Bishopsgate-street Within, E.C.*
1874	Couch, The Rev. Enos. M.A., F.R.G.S. 19, *Old Gravel-lane, E.*
1862	COURTNEY, PROFESSOR LEONARD HENRY, M.A., *Chapel Staircase, Lincoln's-inn, W.C.*
1874	Cowell, Herbert, 2, *Westbourne-square, W.*

Year of Election	
1873	Cowper, The Hon. Henry Frederick, M.P., 4, *St. James's-square, S.W.*
1857	*Cowper-Temple, The Right Hon. William Francis, M.P., 15, *Great Stanhope-street, W.*
1874	Craigie, Captain Patrick George, *Hartley House, Lower Heath, Hampstead, N.W.*
1870	Craik, George Lillie, 29, *Bedford-street, Strand, W.C.*
1872	Crellin, Philip, 15, *Coleman-street, E.C.*
1873	Cromwell, The Rev. Canon, M.A., *St. Mark's College, Chelsea, S.W.*
1862	Cudlip, Joseph Stevens, F.I.A., 44, *Union-street, Plymouth.*
1848	Cutcliffe, George, F.I.A., 13, *St. James's-square, S.W*
1873	Czarnikow, Cæsar, *Mitcham, Surrey.*
1860	Dalyell, The Hon. Robert Anstruther, *Calcutta.*
1873	Danvers, Juland, *India Office, S.W.*
1869	Davies, James Mair, 135, *Buchanan-street, Glasgow.*
1874	Davies, William Henry, 51, *Tregunter-road, S.W.*
1874	Davis, Sir John Francis, Bart., K.C.B., *Hollywood, Westbury, Bristol.*
1855	*Dawbarn, William, *Elmswood Hall, Aigburth, Liverpool.*
1873	Dawson, James Thomas, 9, *Old Broad-street, E.C.*
1873	Delahunty, James, 2, *Savile-row, W.*
1873	Dent, Clinton Thomas, 12, *Hyde-park Gardens, W.*
1873	Dent, Edward, 12, *Hyde-park Gardens, W.*
1855	*DERBY, THE RIGHT HONOURABLE THE EARL OF, P.C., F.R.S., (*Honorary Vice-President*), 23, *St. James's-square; and Knowsley, Prescot, Lancashire.*
1866	*Dilke, Sir Charles Wentworth, Bart., M.P., LL.M., 76, *Sloane-street, S.W.*
1873	Divett, Edward Ross, *Reform Club, S.W.*

Year of Election	
1873	Dixon, George, M.P., 46, *Queen's-gate, S.W.*
1874	Dow, James Alexander, 5, *Lothbury, E.C.*
1872	Droop, Henry Richmond, 1*a*, *New-square, Lincoln's-inn, W.C.*
1871	Duncan, James, 5, *Highbury-hill, N.*
1870	Duprat, Le Vicomte (*Consul-Général de Portugal*) 46, *Palace-gardens-terrace, Kensington, W.*
1836	Edmonds, Thomas Rowe, B.A., 72, *Portsdown-road, Maida-vale, W.*
1869	Edmonds, William, *Airedale Villa, Elm-grove, Southsea.*
1872	Elliott, Sir George, Bart., M.P., *Park-street, Park-lane, W.*
1842	Elliott, John Hawkins, 4, *Martin's-lane, City, E.C.*
1874	Elliot, Robert, M.D., F.R.C.P., 35, *Lowther-street, Carlisle.*
1873	Ellissen, Adolf, 28, *Maida-hill West, W.*
1873	Elsey, John Green, J.P., *Morant House, Addison-road, Kensington, W.*
1873	Emanuel, Lewis, 36, *Finsbury-circus, E.C.*
1862	Evens, John Henry, 9, *Finsbury-place, E.C.*
1842	*Everest, The Rev. Robert, *Westwick House, Ascot.*
1834	Eversley, The Right Honourable Viscount, D.C.L., LL.D., 114, *Eaton-square, S.W.; and Winchfield, Hants*
1867	Fairley, William, *Lydney, Gloucestershire.*
1874	Farmer, James, 6, *Porchester-gate, Hyde Park, W.*
1839	FARR, WILLIAM, M.D., D.C.L., F.R.S. (*Honorary Vice-President*), *General Register Office, Somerset House, Strand, W.C.; and Southlands, Bromley, Kent.*
1868	Farrell, John Douglas, *Bank of England, West Branch, Burlington-gardens, W.*

Year of Election.	
1872	Feigan, John Albert, *Glen May, Fallowfield, Manchester.*
1864	Fellows, Frank P., 8, *The Green, Hampstead, N.W.*
1874	Ferguson, A.M. (*Senior Editor of Ceylon Observer*), *Colombo, Ceylon.*
1874	Ferguson, J. (*Editor of the Ceylon Observer*), *Colombo, Ceylon.*
1834	Finch, John, *Heathside, Tunbridge Wells.*
1873	Fisher, Henry, *Midland Bank, Leeds.*
1873	Fisher, Richard Charles, 6, *New Bridge-street, E.C.*
1865	FitzWilliam, William Shelford, F.R.G.S , 12, *Gunter-grove, Chelsea, S.W.*
1841	Fortescue, The Right Honourable Earl, *Castle-hill, South Moulton, Devonshire.*
1871	Forwood, William Bower, *Ramlet, Blundellsands, Liverpool.*
1868	Fowler, William, 30, *Lombard-street, E.C.*
1873	Franklin, Jacob Abraham, *London Institution, Finsbury-circus, E.C.*
1844	*Freeland, Humphrey William, *Athenæum Club, S.W.; and Chichester.*
1872	Freeman, Francis, 63, *Pall Mall, S.W.*
1874	Gatliff, Charles, 8, *Finsbury-circus, London, E.C.*
1852	Galsworthy, Edwin Henry, F.I.A., 18, *Upper Wimpole-street, W.*
1873	*Galton, Capt. Douglas, R.E., C.B., F.R.S., 12, *Chester-street, Grosvenor-place, S.W.*
1860	GALTON, FRANCIS, F.R.S., F.R.G.S., 42, *Rutland Gate, S.W.*
1872	Gastrell, Colonel J. E. (care of H. J. Gastrell), 36, *Lincoln's-inn-fields, W.C.*
1865	*Gibbons, Sir Sills John, Bart., *Calvert's-buildings*, 17, *Southwark-street, S.E*
1872	Gibb, Thomas Eccleston, 16, *Lady Margaret-road, N.W.*
1874	Gibbs, Alban George Henry, *St. Dunstans', Regent's-park, N.W.*
1871	Gibbs, George Sleight, *Darlington.*

Year of Election.	
1867	GIFFEN, ROBERT (*Honorary Secretary*), 44, *Pembroke-road, Kensington, W.*
1834	GLADSTONE, RIGHT HON. WILLIAM EWART, M.P., D.C.L (*Honorary Vice-President*), 11, *Carlton House-terrace, S.W.*
1860	Glover, John, 22, *Great St. Helen's, Bishopsgate-street, E.C.*
1874	Goad, Edward, 114, *Chancery-lane, W.C.*
1869	Goldney, Gabriel, M.P., 40, *Hill-street, Berkeley-square, W.; and Beechfield House, Chippenham.*
1850	Goldsmid, Sir Francis Henry, Bart., M.P., Q.C., *St. John's Lodge, Regent's-park, N.W.*
1868	Göschen, The Right Hon. George Joachim, M.P., 66, *Mount-street, Grosvenor-square, W.*
1855	*Gosset, John Jackson, *Thames Ditton, Surrey.*
1873	Gouly, Edward James, *Bullion Office, Bank of England, E.C.*
1853	Gover, William Sutton, F.I.A., 4, *Queen-street-place, Southwark Bridge, E.C.*
1847	Gray, Thomas, 34, *Fenchurch-street, E.C.*
1834	Grey, Right Hon. Sir George, Bart., G.C.B., *Fallodon, Chathill, Northumberland.*
1868	Griffith, Edward Clifton, 30, *St. James's-square, S.W.*
1841	Griffith, John, 6, *Hanover-terrace, Regent's-park, N.W.*
1841	Griffith, Richard Clewin, F.R.G.S., 20, *Gower-street, W.C.*
1872	Griffiths, John George, 4, *Lothbury, E.C.*
1865	Gurney, Daniel, *North Runcton, near King's Lynn, Norfolk.*
1839	GUY, WILLIAM AUGUSTUS, M.B., F.R.S. (PRESIDENT), 12 (late 26), *Gordon-street, Gordon-square, W.C.*

1867	Haddon, Frederick William, "*Melbourne Argus*" *Office, Melbourne, Victoria.*
1873	Haggard, Frederick T., *Eltham Court-road, Eltham, Kent.*

Year of Election.	
1872	Haliburton, R. G., *The Athenæum Club, S.W.*
1869	Hall, James Macalester, *Woodside-crescent, Glasgow.*
1860	Hamilton, Archibald, *South Barrow, Bromley, Kent.*
1873	Hamilton, Lord George Francis, M.P., 17, *Montagu-street, Portman-square, W.*
1841	Hamilton, Terrick, F.R.G.S., 21, *Park-street, Grosvenor-square. W.*
1855	HAMMICK, JAMES THOMAS (*Treasurer*), *General Register Office, Somerset House, W.C.*
1841	HAMPTON, THE RIGHT HON. LORD, G.C.B. (*Honorary Vice-President*), 9, *Eaton-square, S.W.; and Westwood-park, Droitwich.*
1873	Hanbury, Robert William, M.P., *East Close, Christchurch, Hants.*
1869	Hancock, William, 33, *Cornhill, E.C.*
1837	*Hankey, John Alexander, *Balcombe-place, Cuckfield, Sussex.*
1861	Hannyngton, Major-General John Caulfield, F.I.A., *India Office, S.W.*
1871	Harcourt, Sir William Vernon. Q.C., M.P., 14, *Stratford-place, W.*
1871	Hare, Francis Augustus Cox, *King-street, Manchester.*
1868	Harris, David, *Caroline Park, Granton, Edinburgh.*
1868	Harrison, John, jun., 85, *Northgate, Darlington.*
1870	Hartley, Fountain John, *Laurel House, Graham-road, Dalston, E.*
1834	HARROWBY, THE RIGHT HON. THE EARL OF, K.G., D.C.L., F.R.S. (*Honorary Vice-President*), 39, *Grosvenor-square, W.*
1873	Haughton, Benjamin, C.E., 1, *Westminster-chambers, Victoria-street, S.W.*
1834	Hawkins, Francis Bisset, M.D., F.R.S., 146, *Harley-street, W.*
1834	Hawkins, John Heywood, M.A., F.R.S., *Bignor Park, Pulborough.*
1873	Hay, James Lamb Napier, *Manager, Queen Insurance Company, Calcutta.*
1871	Head, Jeremiah, *Coatham, Redcar, Yorkshire.*
1870	Hefford, G. V., *Rugby.*
1860	Helder, Stewart, F.I.A., 2, *Broad Sanctuary, S.W.*

Year of Election.	
1865	Hendriks, Augustus, F.I.A., 7, *Cornhill, E.C.*
1855	*HENDRIKS, FREDERICK, 1, *King William-street, E.C.*
1874	Hepworth, Samuel Chadwick, *New Wakefield Mills, Dewsbury.*
1858	Herapath, Spencer, F.G.S., 18, *Upper Phillimore-gardens, W.*
1874	Hertz, James, *Belgrave Mansions, S.W.*
1873	Hewlings, Stewart, *London and County Bank*, 21, *Lombard-street, E.C.*
1834	*HEYWOOD, JAMES, M.A., F.R.S. (*Trustee and Vice-President*), 26, *Palace-gardens, Kensington, W.; Athenæum Club.*
1869	Hickson, Joseph, *Montreal, Canada.*
1834	Hill, Sir Rowland, K.C.B., D.C.L., F.R.S., *Hampstead, N.W.*
1873	Hime, Capt. H. W. L., R.A., *Aldershot.*
1859	Hincks, His Excellency, Sir Francis, *Montreal, Canada.*
1870	*Hoare, Henry, 9, *St. James's-square, S.W.*
1858	Hobson, Jesse, *Grove House, Shacklewell, E.*
1834	*Hodge, William Barwick, F.I.A., 5, *Whitehall, S.W.*
1867	Hodgson, W. B., LL.D., *Bonaly, Colinton, N.B.*
1873	Hogg, Colonel Sir James Macnaughten, M.P., 26, *Grosvenor-gardens, S.W.*
1874	Hood, Charles, F.R.S., F.R.A.S., *Grangewood, Upper Norwood, S.E.; and Earls-street, Blackfriars, E.C.*
1871	Hooper, Angus Cameron, *Montreal, Canada.*
1874	Hooper, George D., *Pembroke Villa, Oxford-road, Chiswick.*
1855	HOUGHTON, THE RIGHT HONOURABLE LORD, D.C.L., F.R.S., (*Honorary Vice-President*), *Fryston Hall, Ferrybridge, Yorkshire.*
1871	Hoyer, Henry, care of W. A. Hoyer, 31, *Priory-road, South Lambeth, S.W.*
1872	Hubbard, Egerton J., M.P. 4, *St. Helen's-place, Bishopsgate-street, E.C.*
1853	*Hubbard, The Right Hon. John Gellibrand, M.P., *Bank of England, E.C.*
1864	Hudson, Thomas, 12, *Wellington-place, Ashley-road, Bristol.*

Year of Election.	
1871	Hughes, Albert William, *Kurrachee, Bombay, India.*
1872	Humphreys, George, M.A., F.I.A., 79, *Pall Mall, S.W.*
1874	Humphrey, Noel Algernon, *Register-General's Office, Somerset House, W.C.*
1873	Hunt, Henry Arthur, C.B., 54, *Eccleston-square, S.W.*
1857	Hurst, George, *King's Brook House, St. Mary's, Bedford.*
1874	Hutton, Charles William Cookworthy, J.P., *Belair, Dulwich, S.E.*
1873	Hyndman, Henry Mayer, 10, *Devonshire-street, Portland-place, W.*
1866	Ince, Henry Bret, 18, *Old-square, Lincoln's-inn, W.C.*
1869	Ingall, Samuel, *Kent-end, Forest-hill, Kent, S.E.*
1874	*Ingall, William Thomas Fitzherbert Mackenzie, 50, *Threadneedle-street, E.C.*
1869	Inglis, Cornelius, M.D., *Athenæum Club, Pall Mall, S.W.*
1839	Irving, John, 94, *Eaton-place, S.W.*
1869	Isaacs, Henry A., *Hillworth Lodge, Lower Tulse-hill, Brixton S.W.*
1864	*Ivey, George Pearse, *Perry-hill, Catford, S.E.*
1872	**JANSON, FREDERICK HALSEY**, F.L.S., 41, *Finsbury-circus, E.C., and Oak Bank, Chislehurst.*
1851	*Jellicoe, Charles, F.I.A., 12, *Cavendish-place, W.*
1862	**JEULA, HENRY**, F.R.G.S., 29, *Gracechurch-street, E.C.*
1864	*Jevons, Professor William Stanley, M.A., *Parsonage-road, Withington, Manchester.*
1871	Johnson, Edmund, 3, *Northwick-terrace, Maida-hill, N.W.*

Year of Election.	
1872	Johnston, Francis J., *Lamas, Chislehurst.*
1874	Jones, Herbert, 15, *Montpelier-row, Blackheath, S.E.*
1873	Jones, Sir Willoughby, Bart., M.A., *Cranmer Hall, Fakenham, Norfolk.*
1858	**Jourdan, Francis,** *Avenue House, Hampstead, N.W.*
1862	Kain, George James, 69, *Chancery-lane, W.C.*
1873	Kay, Duncan James, 60, *Queen's-gate, S.W.*
1874	Kelly, Charles, M.D., *Shoreham, West Sussex.*
1867	Kelly, Edward Robert, A.M., *Cressy House, New-road, Shepherd's-bush, W.*
1873	Kemp, Samuel, *Oriel House, Bath.*
1864	Kennedy, Colonel John Pitt, 66, *St. George's-square, S.W.*
1868	Kennedy, Peter, 13, *Cornwall-terrace, Regent's-park, N.W.*
1870	Kennedy, William R., 27, *Rodney-street, Liverpool*
1874	Kennelly, David Joseph, F.R.G.S., F.R.A.S., 3, *Clarence-terrace, Regent's-park, N.W.*
1852	Kimberley, The Right Honourable the Earl of, M.A., P.C., 35, *Lowndes-square, S.W.*
1873	King, George, F.I.A., *Alliance Life Office, Bartholomew-lane, E.C.*
1872	Knight, John P., *London, Brighton, & S. Coast Rail., London Bridge, E.C.*
1865	Knight, Robert, "*Indian Economist*" *Office, Calcutta.*
1865	Kühner, Henry, 39, *Lombard-street, E.C.*
1869	Kyshe, John B., *Colonial Office, Mauritius.*
1873	**Lack, H. Reader** (*Honorary Secretary*), *Board of Trade, Whitehall-gardens, S.W.*
1863	Lambert, John, C.B., *Local Government Board, Whitehall, S.W.*

Year of Election.	
1869	Lamport, Charles, *Plasmawr, Penmaen Mawr, North Wales.*
1873	Lancaster, D., *Indian Life Assurance Company, Meerut, India.*
1874	Lang, George Murray, R.N., 18, *Cheyne-walk, Chelsea, S.W.*
1844	*Larcom, General, Sir Thomas A., Bart., K.C.B., LL.D., F.R.S., *Heathfield, Fareham, Hants.*
1874	Lawes, John Bennett, F.R.S., F.C.S., *Rothamsted, St. Albans.*
1873	Lawrence, The Right Hon. Lord, G.C.B., G.C.S.I., 26, *Queen's-gate, S.W.*
1873	Lawrie, James, F.R.G.S., *Kelvin House, Quadrant-road, Highbury, N.*
1873	Lawson, Robert, 30, *Lansdowne-road, Notting-hill, W.*
1873	Lea, Thomas, 72, *Chester-square, S.W.*
1870	Leitch, John Muir, 18, *King William-street, E.C.*
1873	Leslie, Francis Seymour, *Home Office, Whitehall, S.W.*
1851	LEVI, PROFESSOR LEONE, LL.D., F.S.A., 10, *Farrar's-buildings, Temple, E.C.; and* 19, *Richmond-crescent, Barnsbury, N.*
1867	Lewis, Charles Edward, M.P., 8, *Old Jewry, E.C.*
1873	Lewis, James, *General Register Office, Somerset House, W.C.*
1862	Lewis, Robert, 1, *Bartholomew-lane, E.C.*
1862	Leyland, John E., F.I.A., 216, *Piccadilly, W.*
1868	Lissa, Joseph J. Cohen de, *Port Louis, Mauritius.*
1845	*Lister, William,
1834	Lloyd, John Horatio, 100, *Lancaster-gate, Hyde-park, W.*
1874	Lloyd, Sampson Samuel, M.P., 14, *Queen's-gate Gardens, S.W.*
1864	Logan, D., *Care of Messrs. Richardson,* 23, *Cornhill, E.C.*
1834	Lovelace, The Right Honourable the Earl of, F.R.S., *East Horsley Park, Ripley, Surrey.*
1865	LUBBOCK, SIR JOHN, BART., M.P., F.R.S. (*Trustee*), *High Elms, Farnborough, Kent.*
1843	LUMLEY, WILLIAM GOLDEN, Q.C., LL.M. (*Vice-President*), *Local Government Board, Whitehall, S.W.*

Year of Election.	
1874	Lycett, Sir Francis, 18, *Highbury-grove, London, N.*
1873	*Macandrew, William, J.P., *Westwood House, near Colchester.*
1873	McArthur, Alexander, M.P., *Raleigh Dale, Brixton, S.W.*
1873	McArthur, William, M.P., F.R.G.S. (Alderman), *Gwydyr House, Brixton, S.W.*
1867	M'Clean, Frank, 23, *Great George-street, S.W.*
1864	MacClelland, James, 32, *Pembridge-square, W.*
1873	McDermott, Edward, 3, *Whitefriars-street, E.C.*
1868	Macdonald, James, 7, *Lothbury, E.C.*
1872	Macdonell, John, 1, *Pump-court, Temple, E.C.*
1873	*McEwen, Laurence T., *Lombard House, George-yard, Lombard-street, E.C.*
1856	MacGillivray, Donald, F.I.A., 39A, *Moorgate-street, E.C.*
1874	Mackay, Alexander Eugene, M.D., F.R.C.S., *Admiralty*, 9, *New-street, Spring-gardens, S.W.*
1871	Mackay, James Macgregor, 32, *Brunswick-square, Brighton.*
1866	McKenna, W.C., 18, *King-street, E.C.*
1871	Mackenzie, Alfred Westwood, 8, *Grove-villas, The Grove, Hammersmith, W.*
1834	Mackenzie, The Right Hon. Holt, *Athenæum Club, Pall Mall, S.W.*
1874	Mackenzie, John Henry, F.R.G.S., 1, *Crown-court, Old Broad-street, E.C.*
1871	Mackeson, Charles, *The Admiralty, New-street, Spring-gardens, S.W.*
1870	Maclagan, David, 22, *George-street, Edinburgh.*
1874	Macleod, The Right Hon. Sir John Macpherson, K.C.S.I., 1, *Stanhope-street, Hyde Park, W.*

Year of Election	
1863	Maclure, J. W., *Fallowfield, Manchester; and Conservative Club, S.W.*
1871	Malgarini, Frederick Lewis, 7, *Whitehall-place, S.W.*
1852	Mann, Horace, *Civil Service Commission, Cannon-row, Westminster, S.W.*
1872	Manning, The Most Rev. Archbishop, *Archbishop's House, Westminster, S.W.*
1874	Markham, Clements, R., C.B., F.R.G.S., F.L.S., F.S.A., 21, *Eccleston-square, S.W.*
1860	Marsh, Matthew Henry, *Bamridge, near Andover, Hants.*
1865	Martin, Frederick, 12, *Fortess-terrace, N.W.*
1873	Martin, Henry, *National Bank of India*, 80, *King William-street, E.C.*
1867	Martin, James, *St. Brides-street, Ludgate-hill, E.C.*
1874	Martin, John Biddulph, M.A., F.Z.S., 6B, *The Albany, Piccadilly, W.*
1872	*MARTIN, RICHARD BIDDULPH, M.A., 68, *Lombard-street, E.C.*
1870	Maxse, Captain Frederick A., R.N., 67, *Cromwell-road, South Kensington, S.W.*
1874	May, Frank (*Chief Cashier*), *Bank of England, Threadneedle-street, E.C.*
1874	Maynard, Henry Wheler, *St. Aubyns, Grosvenor-hill, Wimbledon, S.W.*
1873	Meen, Joseph Austin, 30, *Lombard-street, E.C.; and* 44, *Lordship-road, Stoke Newington, N.*
1853	*Meikle, James, 6, *St. Andrew's-square, Edinburgh.*
1873	Mellor, T. Randolph, C.E., 29, *Martin's-lane, Cannon-street, E.C.*
1861	Messent, John, F.I.A., 429, *West Strand, W.C.*
1872	Michell, Robert, *India Office, S.W.*
1873	Millar, William Henry, *Cleveland Lodge, New Park-road, Brixton-hill, S.W.*
1864	Minett, John Thomas, 1, *Adelaide-place, E.C.*
1874	*Mocatta, F. D., F.R.G.S., 9, *Connaught-place, W.*
1842	Moffatt, George, 103, *Eaton-square, S.W.*
1874	Moore, Charles R., 4, *Royal Exchange-buildings, E.C.*

Year of Election.

1874 Moore, Sandford, M.B.,
Army Medical Department, Netley, Southampton.
1872 Morgan, Octavius Vaughan,
13, *Boltons, West Brompton, S.W.*
1873 *Morley, Samuel, M.P.,
18, *Wood-street, E.C.*
1874 Morris, James, M.D., F.R.C.S.,
13, *Somers-place, Hyde-park-square, W.*
1874 Morris, John,
6, *Old Jewry, London, E.C.*
1873 Morton, James,
Balclutha, Greenock, N.B.
1847 *MOUAT, FREDERIC JOHN, M.D., F.R.C.S. (*Honorary Secretary and Foreign Secretary*),
12, *Durham-villas, Kensington, W.*
1858 Muir, Thomas,
24, *York-terrace, Regent's-park, N.W.*
1850 Murchison, John Henry,
8, *Austin Friars, E.C.*

1865 Nasmith, David,
4, *Garden-court, Temple, E.C.*
1854 Neild, Alfred,
Mayfield, Manchester.
1869 Neison, Francis Gustavius Paulus, jun.,
93, *Adelaide-road, South Hampstead, N.W.*
1862 Newbatt, Benjamin, F.I.A., F.R.G.S.,
13, *St. James's-square, S.W.*
1847 *NEWMARCH, WILLIAM, F.R.S., F.I.A. (*Trustee and Honorary Vice-President*),
67, *Lombard-street; and Beech Holme, Nightingale-lane, Clapham-common, S.W.*
1869 Newmarch, William T., A.A., Oxon,
45, *Fish-street Hill, E.C.*
1858 Nightingale, Miss Florence,
35, *South-street, W.*
1874 Nissen, Hillary Nicholas, J.P.,
43, *Mark-lane, E.C.*
1871 *Noble, Benjamin,
North-Eastern Bank, Newcastle-on-Tyne.
1870 Noble, John,
5, *Queen Anne's-gate, Westminster, S.W.*
1873 Noott, Major Francis Harry,
The Convict Prison, Dartmoor.

Year of Election.

1874 Norfolk, Ernest Walter,
4, *St. Michael's-road, Stockwell, S.W.*

1834 Norman, George Warde,
Bromley, Kent.

1869 Norwood, Charles Morgan, M.P.,
21, *Billiter-street, E.C.*

1862 Ogbourne, Charles Henry,
29, *Dalhousie-square, Calcutta.*

1874 Overall, William Henry, F.S.A.,
Librarian, Guildhall, E.C. (Representing the Library Committee of the Corporation of the City of London.)

1834 *OVERSTONE, THE RIGHT HONOURABLE LORD, F.R.G.S.
(*Honorary Vice-President*),
2, *Carlton-gardens, S.W.*

1866 Palgrave, Robert Harry Inglis,
11, *Britannia-terrace, Great Yarmouth, Norfolk.*

1870 Parker, Josiah Samuel,
5, *Featherstone-buildings, Holborn, W.C.*

1869 PATTERSON, ROBERT HOGARTH,
11, *Wellington-terrace, Hammersmith, W.*

1870 Pattison, William Pollard, F.I.A.,
52, *Brook-street, Grosvenor-square, W.*

1873 Pearce, Charles William,
14, *Burnley-road, Stockwell, S.W.*

1837 *Pearson, Professor John, Q.C.,
13, *Beaufort-gardens, Brompton-road, S.W.*

1871 Pennington, Frederick, M.P.,
17, *Hyde Park-terrace, W.*

1874 Pepys, The Hon. George,
7, *Norfolk-square, Hyde*-park, *W.*

1874 Phené, John S., F.R.G.S., F.S.A., &c.,
5, *Carlton-terrace, Oakley-street, S.W.*

1835 *Phillips, Sir George Richard, Bart.,
22, *Hill-street, Berkeley-square, W.*

1859 Phillips, Henry James,
4, *Ludgate-hill, E.C.*

1873 Phillips, John Searle R.,
4, *Camp-street, Lower Broughton, Manchester.*

1871 *Pickering, John,
Springfield Mount, Leeds.

Year of Election.	
1873	Pickstone, William, *Maesmynan Hall, Holywell.*
1838	*Pinckard, George Henry, F.I.A., 12, *Grove-road, St. John's-wood, N.W.*
1867	Plener, Ernest von, 18, *Belgrave-square, S.W.*
1861	Plowden, W. C., 12, *Queen's-gate-place, S.W.*
1869	Pochin, Henry Davis, *Barn Elms, Barnes, S.W.*
1874	Ponsonby, The Hon. Frederick George Brabazon, M.A., 3, *Mount-street, Grosvenor-square, W.*
1860	Potter, Edmund, F.R.S., *Camfield-place, Hatfield, Herts.*
1871	Power, Edward, 45, *Belsize-park, N.W.*
1867	Pratt, Robert Lindsay, 80, *Bondgate, Darlington.*
1849	Presant, John, 13, *St. James's-square, S.W.*
1874	Price, John Charles, 5, *Argyle-place, Regent-street, W.*
1870	Prichard, Iltudus Thomas, 4, *Garden-court, Temple, E.C.*
1874	Prinsep, Charles Campbell, *Department of Statistics and Commerce, India Office, S.W.*
1871	Puleston, John Henry, M.P., 41, *Lombard-street, E.C.*
1837	***PURDY, FREDERICK**, *Local Government Board, Whitehall, S.W.: and* 35, *Victoria-road, Kensington, W.*
1868	Purdy, William Frederick, *Local Government Board, Whitehall, S.W.*

1874	Quain, Richard, M.D., F.R.S., F.R.C.P., 67, *Harley-street, W.*

1872	*Rabino, Joseph, *Credit Lyonnais,* 29, *Lombard-street, E.C.*
1858	*Radstock, The Right Honourable Lord, *East Sheen, Mortlake, S.W.*
1864	*Raleigh, Samuel, 9, *St. Andrew-square, Edinburgh.*
1860	Ramsay, Alexander Gillespie, F.I.A., *Canada Life Assurance, Hamilton, Canada West.*

Year of Election.	
1874	Ramsden, Sir James, of Barrow, J.P. and D.L., *Furness Abbey, Lancashire.*
1865	Ratcliff, Charles, *Athenæum Club, S.W.; and Wyddrington, Birmingham.*
1859	Rathbone, P. H., *Greenbank Cottage, Liverpool.*
1874	*Ravenstein, Ernest George, 15, *Lorn-road, Brixton, S.W.*
1870	Rawlinson, Robert, C.B., 11, *Boltons, West Brompton, S.W.*
1835	Rawson, His Excellency Rawson William, C.B., *Government House, Barbados.*
1874	Rayner, Captain William Stephen M., 56, *Pall Mall, S.W.*
1856	Redgrave, Alexander, *Home Office, Whitehall, S.W.*
1834	*Redgrave, Samuel, 17, *Hyde-park-gate South, Kensington, S.W.*
1874	Reed, Captain Andrew Gildart, 9, *Cleveland-gardens, Hyde-park, W.*
1870	Rees, William, 4, *Cavendish-place, All Saints, Manchester.*
1867	Reid, Herbert Lloyd, 3, *Eland-terrace, Lavender-hill, S.W.*
1874	Reuter, Baron Julius de, F.R.G.S., 18, *Kensington Palace-gardens, W.*
1862	Reynolds, Frederick, *Education Department, Downing-street, S.W.*
1870	Rich, Elihu, 33, *Maitland-park-road, Haverstock-hill, N.W.*
1873	Ripon, The Most Hon. the Marquess of, K.G., F.R.S., &c., 1, *Carlton-gardens, S.W.*
1851	Robertson, Alexander, 112, *Bishopsgate-street Within, E.C.*
1868	Robinson, W., *Civil Service, Madras.*
1859	Rogers, Professor J. E. Thorold, M.A., 8, *Beaumont-street, Oxford.*
1873	*Rosebery, The Right Hon. the Earl of, 2, *Berkeley-square, W.*
1834	*Ross, David, of Bladensburg, *Rostrevor, Co. Down, Ireland.*
1865	Ruck, George T., 47, *Camden-road, N.W.*
1834	RUSSELL, THE RIGHT HONOURABLE EARL, K.G. (*Honorary Vice-President*), 37, *Chesham-place, S.W.*
1874	Rutherford, Charles, 29, *St. Swithin's-lane, E.C.*

Year of Election.	
1873	*Salisbury, The Most Hon. the Marquess of, P.C., F.R.S., 20, *Arlington-street, W.*
1868	Samuelson, Bernhard, M.P. *Banbury.*
1874	Sandford, George Montague Warren, M.P., 33, *Hertford-street, Mayfair, W.*
1862	Sargant, William Lucus, *Edgbaston, Birmingham.*
1874	Saunders, Francis, 6, *Limes-grove, Lewisham, S.E.*
1850	Saunders, James Ebenezer, jun., F.G.S., 9, *Finsbury-circus, E.C.*
1869	Sayle, Philip, jun., 89, *Cannon-street, E.C.*
1865	Scudamore, Frank Ives, C.B., *General Post Office, St. Martin's-le-Grand, E.C.*
1866	Senior, George, *Rose Hill, Dodworth, near Barnsley.*
1869	SEYD, ERNEST, 1A, *Princes-street, E.C.*
1873	Seyd, Richard, 1A, *Princes-street, E.C.*
1871	Shadwell, John Lancelot, 21, *Nottingham-place, W.*
1841	SHAFTESBURY, THE RIGHT HON. THE EARL OF, K.G. (*Honorary Vice-President*), 24, *Grosvenor-square, W.*
1874	Shaw, Captain Eyre Massey, *Metropolitan Fire Brigade, Watling-street, E.C.*
1869	Shaw, John, *South Eastern Railway, London Bridge, E.C.*
1873	Sherborne, The Right Honourable Lord, *Sherborne-park, Northleach, Gloucestershire.*
1874	Sibson, Francis, M.D., F.R.S., 59, *Brook-street Grosvenor-square, W.*
1871	Sidgwick, Henry, *Trinity College, Cambridge.*
1850	Singer, Charles Douglas, 9, *The Terrace, Upper Clapton, E.*
1873	Skoines, Henry Frost, 7, *Argyle-street, King's Cross, W.C.*
1869	Smee, Alfred Hutcheson, M.R.C.S., 7, *Finsbury-circus, E.C.*
1874	Smith, Edward, *Gresham Life Office,* 37, *Old Jewry, E.C.*

Year of Election	
1871	Smith, E. Cozens, 1, *Old Broad-street, E.C.*
1873	Smith, Col. J. T., R.E., F.I.A., *Foellant House, Lee, Kent, S.E.*
1867	*Smith, William Henry, M.P., 2, *Hyde-park-street, W.*
1873	Snudden, W. L., 2, *Lombard-street, E.C.*
1848	***Sopwith, Thomas**, M.A., F.R.S., 103, *Victoria-street, S.W.*
1855	Sowray, John Russell, *Office of Woods*, 1, *Whitehall-place, S.W.*
1874	Spence, James Mudie, F.R.G.S., F.Z.S., 3, *Bond-street, Manchester.*
1873	Spence, John Berger, 75, *Mark-lane, E.C.*
1867	*Spencer, Robert James, *High-street, Portsmouth.*
1874	Spicer, James, J.P., *Harts, Woodford, Essex.*
1856	*Sprague, Thomas Bond, M.A., F.I.A., 26, *St. Andrew-square, Edinburgh.*
1872	Spriggs, Joseph, *Dale Cottage, Foxton, near Market Harbro'.*
1856	*Stainton, Henry Tibbats, *Mountsfield, Lewisham, S.E.*
1874	Stainton-Moses, William, M.A. (Oxon), *University College, London, W; and Scientific Club, W.*
1872	**Stanhope, The Right Hon. Earl**, D.C.L., F.R.S. (*Vice-President*), 3, *Grosvenor-place-houses, S.W.*
1870	Stark, William Emery, 1, *Temple-row West, Birmingham.*
1874	Stone, The Rt. Hon. David Henry (*Lord Mayor of London*), *Mansion House, E.C.*
1855	Stott, John, F.I.A., *St. Vincent-place, Glasgow.*
1865	Strachan, Thomas Y., F.I.A., 18, *Grainger-street West, Newcastle-on-Tyne,*
1872	**Strachey, General Richard**, R.E., F.R.S., *India Office, S.W.*
1836	*Symonds, Arthur, 4, *South-square, Gray's-inn, W.C.*

Year of Election.	
1873	Tait, Lawson, F.R.C.S., *Birmingham.*
1859	Tait, Patrick Macnaghten, 39, *Belsize Park, N.W.; and Oriental Club, W.*
1856	Tartt, William Macdowal, *Sandford-place, Cheltenham.*
1854	TAYLER, WILLIAM, F.S.A. 28, *Park-street, Grosvenor-square, W.*
1873	Taylor, Peter Alfred, M.P., 22, *Ashley-place, Westminster, S.W.*
1838	*Taylor, Major-General Pringle,
1834	*Tennent, Robert J., *Athenæum Club, S.W.; and Belfast.*
1864	*Thompson, Henry Yates, 32, *Ennismore-gardens, S.W.*
1862	Thomson, Henry, 1, *Dale-street, Liverpool.*
1868	Thomson, James, 35, *Nicholas-lane, E.C.*
1871	Thomson, Thomas D., 79, *Cornhill, E.C.*
1871	Thurlow, The Right Hon. Lord,
1855	Tomline, Colonel George, 1, *Carlton House-terrace, S.W.*
1873	Tomson, Whitbread, *London and County Bank*, 21, *Lombard-street, E.C.*
1843	Tottie, John William, *Coniston Hall, Bell Bush, Leeds.*
1868	*Treatt, Frank Burford, *Sydney, New South Wales*
1868	Tritton, Joseph Herbert, 54, *Lombard-street, E.C.*
1852	Tuke, Harrington, M.D., 37, *Albemarle-street, W.; and Manor House, Chiswick.*
1866	Tully, Thomas, 69, *Great Queen-street, Lincoln's-inn-fields, W.C.*
1834	*Turnbull, The Rev. T. S., F.R.S., *University Club, S.W.; and Blofield, Norfolk.*
1867	Turner, Thomas *Kingsdown, Bristol.*
1873	Tweeddale, The Most Hon. the Marquess of, K.T., G.C.B., *United Service Club, Pall Mall, S.W.*
1841	Tyndall, William Henry, 92, *Cheapside, E.C.*

Year of Election.	
1873	Underdown, Robert George, *Manchester Sheffield and Lincolnshire Railway, London-road Station, Manchester.*
1834	Urquhart, David,
1842	Valpy, Richard, *Board of Trade, Whitehall-gardens, S.W.*
1871	Vanderbyl, Philip, 51, *Porchester-terrace, W.*
1873	Venables, Alfred, 30, *Royal Exchange, E.C.*
1874	Vian, William John, 64, *Cornhill, E.C.*
1873	Vivian, Major Quintus, J.P., D.L., F.R.G.S., 17, *Chesham-street, S.W.*
1861	Waddell, James, 12, *Queen Victoria-street, E.C.*
1874	Waite, Henry, F.R.G.S., 3, *Victoria-street, Pimlico, S.W.*
1857	Wakeford, Henry, 44, *Parliament-street, S.W.*
1871	*Walford, Cornelius, F.I.A., *Enfield House, Belsize-park-gardens, N.W.*
1854	*Walker, R. Bailey, *The Hurst, Heaton Mersey, Manchester.*
1868	Walker, Thomas, B.A., F.I.A., *Shrewsbury-lane, Plumstead, Kent, S.E.*
1850	Wallis, Charles, J., 1, *The Terrace, Kilburn, N.W.*
1874	Walter, John, M.P., 40, *Upper Grosvenor-street, W.*
1873	Wanklyn, Edward, 7, *Warwick-road, Maida Hill, W.*
1862	Waring, Charles, 10, *Victoria-chambers, Westminster, S.W.*
1874	Washbourne, Buchanan, M.D., *Gloucester.*
1874	Waterhouse, Captain D. H. Doherty, 5, *Hertford-street, Mayfair, W.*

Year of Election	
1865	Waterhouse, Edwin, B.A., 13, *Gresham-street, E.C.*
1873	Watkin, Sir Edward William, M.P., *Northenden, Manchester.*
1874	Watson, James, F.R.G.S., 23, *Endsleigh-street, London.*
1873	Watson, J. Forbes, M.D., *India Museum, India Office, S.W.*
1865	Watson, William West, *Glasgow.*
1851	Webb, Charles Locock, 5, *New-square, Lincoln's-inn, W.C.*
1865	Webster, Alphonsus, 44, *Mecklenburg-square, W.C.*
1873	Webster, James H., *Keith-lodge, Upper Norwood, S.E.*
1869	Weguelin, Christopher, 55, *Lower Belgrave-street, S.W.*
1873	Weguelin, Thomas Matthias, M.P., 44, *Grosvenor-gardens, S.W.*
1870	Weil, Salomon, 27, *Clifton-gardens, Maida-vale, W.*
1873	*Welby, Reginald Earle, C.B., *The Treasury, Whitehall, S.W.*
1874	Welch, Captain Septimus Robert, 16, *Cambridge-gardens, Notting-hill, W.*
1855	Weldon, James Walton, 1, *St. James's-square, S.W.*
1873	Wellington, His Grace the Duke of, K.G., &c., &c., *Apsley House, Piccadilly, W.*
1873	Wells, Lewis, 66, *Old Broad-street, E.C.*
1855	Welton, Thomas Abercrombie, 6, *Offerton-road, Clapham, S.W.*
1836	*Whishaw, James, 32, *Harewood-square, N.W.*
1859	Whitbread, Samuel, M.P., 10, *Ennismore Gardens, S.W.*
1868	White, James, *St. Petersburgh Cottage, Bayswater, W.*
1863	White, Leedham, 17, *Millbank-street, S.W.*
1871	White, William, 57, *Charing-cross, S.W.*
1873	Whitehead, Jeffery, 39, *Throgmorton-street, E.C.*
1860	Willans, John W., *Baycliffe, near Brighouse.*
1864	Williams, Frederick Bessant, 2, *Ludgate Hill, E.C.*

Year of Election	
1870	Williams, H. R., 3, *Lime-street, E.C.*
1868	Williams, Rowland L. V., 7, *King's Bench Walk, Temple, E.C.*
1874	Williamson, George Joseph, F.R.S.L., F.S.A., 124, *Lower Thames-street, E.C.*
1868	Wilson, Charles Rivers, *Treasury; and* 3, *Chester-street, Belgrave-square, S.W.*
1872	Wilson, Edward, *Hayes-place, near Bromley, Kent.*
1871	Wilson, J. Edwards, *Brunswick House, Bromley, Kent.*
1874	*Wilson, Robert P., 5, *Cumberland-terrace, Regent's Park, N.W.*
1872	*Winch, William R., *Camden Park, Chislehurst.*
1868	Wood, H. W. I. (*Calcutta*), *Care of Messrs. Richardson*, 23, *Cornhill, E.C.*
1873	Woods, Henry, 21, *Hyde-park Gardens, W.*
1838	Woolhouse, Wesley Stoker Barker, *Alwyne Lodge, Alwyne-road, Canonbury, N.*
1874	Woolner, Thomas, R. A., 29, *Welbeck-street, Cavendish-square, W.*
1864	*Wyatt-Edgell, Alfred, 40, *Lower Grosvenor-street, Grosvenor-square, W.; and Stanford Hall, Rugby.*
1838	*Wyatt-Edgell, Rev. Edgell, 40, *Lower Grosvenor-street, Grosvenor-square, W.; and Stanford Hall, Rugby.*
1874	*Wythes, George Edward, *Copt Hall, Epping, Essex.*
1872	Yeatman, Morgan, *Shawfield, Bromley, Kent.*
1849	*Young, Charles Baring, 12, *Hyde-park Terrace, W.*

⁂ *The Executive Committee request that any inaccuracy in the foregoing list may be pointed out to the* ASSISTANT SECRETARY *without delay, and that all changes of address may be communicated.*

HONORARY MEMBERS.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.,
Honorary President.

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Brussels .... SIR HENRY PAGE TURNER BARRON, BART., *Secretary of Legation, British Embassy.*

,, ... M. XAVIER HEUSCHLING, *Chef de Division au Ministère de l'Intérieur du Royaume de Belgique, Sécrétaire de la Commission Centrale de Statistique.*

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,, ... M. AUGUSTE VISSCHERS, *Conseiller au Conseil des Mines, Membre de la Commission Centrale de Statistique.*

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,, ... M. J. E. HORN.

,, ... M. CLEMENT JUGLAR.

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,,	M. DE PARIEU, *Membre de l'Institut Ancien Député Senateur, et Ministre.*
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,,	M. OTTO HUBNER.
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Jena	PROFESSOR BRUNO HILDEBRAND.
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Greece.

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Genoa	SIGNOR FABRIZIO FABIANI.
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,,	THE REV. CESARE CONTINI, *Priest of the Diocese and City of Rome, and Member of the Statistical Society of France.*
,,	MARCHESE AVV. ERMENEGILDO DE CINQUE QUINTILI, *Segretario Generale della Commission degli Ospedali di Roma.*

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,,	THOMAS MICHELL, *Attaché to H.M.'s Embassy.*
,,	HIS EXCELLENCY M. SÉMÉNOW, *Directeur du Comité Central de Statistique, Conseiller d'État actuel.*
,,	M. le DR. J. B. VERNADSKI, *Conseiller d'Etat actuel, Ex-professeur.*

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,,	SEÑOR RAMON DE LASAGRA.
,,	SEÑOR JUAN B. TR'U' PITA.
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,,	M. EDWARD SCHEUTZ.

Switzerland.

Geneva	M. MALLET.

ASIA.

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South Australia.

Adelaide	JOSIAH BOOTHBY, *Under Secretary to the Government of South Australia.*

Tasmania.

Hobart Town	THOMAS EWING.
,, ...	E. SWARBRECK HALL, M.R.C.S.

Victoria.

Melbourne	WILLIAM HENRY ARCHER, *Registrar-General.*

AMERICA.

United States.

Albany, N.Y.	THE HON. WILLIAM BARNES, *Counsellor-at-Law.*
Taunton, Mass.	JOHN E. SANDFORD, *Insurance Commissioner.*
Dorchester, Mass.	DR. EDWARD JARVIS, *President of the American Statistical Association, Boston.*
Norwich, Conn.	The HON. DAVID A. WELLS.

NOTE.—HONORARY MEMBERS are requested to be so good as to inform the Assistant Secretary of any *inaccuracies* or *deficiencies* in the foregoing names and descriptions given, and to communicate hereafter any changes therein.

RULES OF THE STATISTICAL SOCIETY.

Objects of the Society.

1. The Statistical Society was established to collect, arrange, digest, and publish facts illustrating the condition and prospects of society, in its material, social and moral relations. These facts are for the most part arranged in tabular forms, and in accordance with the principles of the numerical method.

The Society not only collects new materials, but condenses, arranges, and publishes those already existing, whether unpublished or published in diffuse and expensive forms, in the English or in any foreign language.

The Society likewise promotes the discussion of legislative and other public measures from the statistical point of view. These discussions form portions of the Transactions of the Society.

Constitution of the Society.

2. The Society consists of Fellows and Honorary Members, elected in the manner laid down in the following rules.

Number of Fellows and Honorary Members.

3. The number of Fellows shall be unlimited. Foreigners or British subjects of distinction residing abroad may be admitted as Honorary Members: of whom the number shall not be more than seventy at any one time.

Proposal of Fellows.

4. Every Candidate for admission as a Fellow of the Society, shall be proposed by two or more Fellows, who, shall certify from their personal knowledge of him or of his works, that he is a fit person to be admitted a Fellow of the Statistical Society. Every such certificate having been read and approved at a Meeting of the Council, shall be suspended in the meeting-room of the Society until the following Ordinary Meeting, at which the vote shall be taken upon it.

Election of Fellows.

5. In the election of Fellows, the votes shall be taken by ballot. No person shall be admitted unless at least sixteen Fellows vote, and unless he have in his favour three-fourths of the Fellows voting.

Admission of Fellows.

6. Every Fellow elect shall appear for his admission on or before the third Ordinary Meeting of the Society after his election, or within such time as shall be granted by the Council.

The manner of admission shall be thus:—

Immediately after the reading of the minutes, the Fellow elect, having first paid his subscription for the current year or his composition, shall sign the obligation contained in the Fellowship-book, to the effect following:—

"We, who have underwritten our "names, do hereby undertake, each for "himself, that we will endeavour to "further the good of the Statistical "Society for improving Statistical "Knowledge, and the ends for which "the same has been founded; that "we will be present at the Meet-"ings of the Society as often as con-"veniently we can, and that we will "keep and fulfil the Rules and Orders "of this Society: provided that when-"soever any one of us shall make known, "by writing under his hand, to the "President for the time being, that he "desires to withdraw from the Society, "he shall be free thenceforward from "this obligation."

Whereon the President, taking him by the hand, shall say,—"*By the autho-"rity and in the name of the Statis-"tical Society I do admit you a "Fellow thereof.*"

Upon their admission Fellows shall have the right of attaching to their names the letters F.S.S.

Admission of Honorary Members.

7. There shall be Two Meetings in the year, on such days as shall be hereafter fixed by the Council, at which *Honorary Members* may be elected. No Honorary Member can be recommended for election but by the Council. Any Member of the Council may propose a Foreigner or British subject of distinction residing abroad at any Meeting of the Council, delivering at the same time a written statement of the qualifications, offices held by, and published works of the person proposed; and ten days' notice at least shall be given to every Member of the Council, of the day on which the Council will vote by ballot on the question whether they will recommend the person proposed. No such recommendation to the Society shall be adopted unless at least three-fourths of the votes are in favour thereof. Notice of the recommendation shall be given from the chair at the Meeting of the Society next preceding that at which the vote shall be taken thereon. No person shall be elected an Honorary Member unless sixteen Fellows vote and three-fourths of the Fellows voting be in his favour.

The Council shall have power to elect as Honorary Members, the President for the time being of the Statistical Societies of Dublin, Manchester, and Paris, and the President of any other Statistical Society at home or abroad.

Payments by Fellows.

8. Every Fellow of the Society shall pay a yearly subscription of *Two Guineas*, or may at any time compound for his future yearly payments by paying at once the sum of Twenty Guineas.

Defaulters.—Withdrawal of Fellows.

9. All yearly payments are due in advance on the 1st of January, and if any Fellow of the Society have not paid his subscription before the 1st of July, he shall be applied to in writing by the Secretaries, and if the same be not paid before the 1st of January of the second year, a written application shall again be made by the Secretaries, and the Fellow in arrear shall cease to receive the Society's publications, and shall not be entitled to any of the privileges of the Society until such arrears are paid; and if the subscription be not discharged before the 1st of February of the second year, the name of the Fellow thus in arrear shall be exhibited as a defaulter on a card suspended in the meeting-rooms; and if, at the next Anniversary Meeting, the amount still remain unpaid, the defaulter shall be announced to be no longer a Fellow of the Society, the reason for the same being at the same time assigned. No Fellow of the Society can withdraw his name from the Society's books, unless all arrears be paid; and no resignation will be deemed valid unless a written notice thereof be communicated to the Secretaries. No Fellow shall be entitled to vote at any Meeting of the Society until he shall have paid his subscription for the current year.

Expulsion of Fellows.

10. If any Fellow of the Society, or any Honorary Member, shall so demean himself that it would be for the dishonour of the Society that he longer continue to be a Fellow or Member thereof, the Council shall take the matter into consideration; and if the majority of the Members of the Council present at some Meeting (of which and of the matter in hand such Fellow or Member, and every Member of the Council, shall have due notice) shall decide by ballot to recommend that such Fellow or Member be expelled from the Society, the President shall at the next Ordinary Meeting announce to the Society the recommendation of the Council, and at the following Meeting the question shall be decided by ballot, and if at least three-fourths of the number voting are in favour of the expulsion, the President shall forthwith cancel the name in the Fellowship-book, and shall say,—

"By the authority and in the name "of the Statistical Society, I do declare "that A. B. (naming him) is no longer "a Fellow (or Honorary Member) "thereof."

And such Fellow or Honorary Member, shall thereupon cease to be of the Society.

Trustees.

11. The property of the Society shall be vested in *three Trustees*, chosen by the Fellows. The Trustees are eligible to any other offices in the Society.

President, Council, and Officers.

12. The Council shall, independent of the Honorary Vice-Presidents, consist of thirty-one Members, of whom one shall be the President, and four be nominated Vice-Presidents. The Council shall be elected as hereafter provided. Any five of the Council shall be a quorum. From the Council shall be chosen a *Treasurer* and *three Secretaries*, one of whom shall be a Foreign Secretary. Six Fellows, at least, who were not of the Council of the previous year, shall be annually elected.

Election of President and Officers.

13. The President shall be chosen yearly by the Fellows. The same person shall not be eligible more than two years in succession.

The former Presidents who are continuing Fellows of the Society shall be Honorary Vice-Presidents; four Vice-Presidents shall be yearly chosen from the Council by the President.

Any Honorary Vice-President may take part in the deliberations of the Council on expressing a wish to that effect: and when attending the Meetings of the Council, shall exercise all the rights and powers of a Member of the Council.

The Treasurer and Secretaries shall be chosen yearly by the Fellows from the Council.

Election of Council.

14. The Council shall, previously to the Anniversary Meeting, nominate, by ballot, the *Fellows whom they recommend* to be the next President and Council of the Society. They shall also recommend for election a Treasurer and three Secretaries. Notice shall be sent to every Fellow whose residence is known to be within the limits of the metropolitan post, at least a fortnight before the Anniversary Meeting, of the names of Fellows recommended by the Council.

Extraordinary Vacancies.

15. On any *extraordinary vacancy* of the Office of the President, or other Officer of the Society, or in the Council, the Secretaries shall summon the Council with as little delay as possible, and a majority of the Council, thereupon meeting in their usual place, shall, by ballot, and by a majority of those present, choose a new President, or other Officer of the Society, or Member of the Council, to be so until the next Anniversary Meeting.

Committees.

16. The Council shall have power to appoint *Committees of Fellows* and also an Executive Committee of their own body. The Committees shall report their proceedings to the Council. No report shall be communicated to the Society which is not approved by the Council.

Meetings Ordinary and Anniversary.

17. The *Ordinary Meetings* of the Society shall be monthly, or oftener, during the Session, which shall be from the 1st of November to the 1st of July, both inclusive, on such days and at such hours as the Council shall declare. The *Anniversary Meeting* shall be held on such day in June of each year as shall be appointed by the Council for the time being.

Business of Ordinary Meetings.

18. The business of the *Ordinary Meetings* shall be to admit Fellows, to read and hear reports, letters, and papers on subjects interesting to the Society. Nothing relating to the rules or management of the Society shall be discussed at the Ordinary Meetings, except that the *Auditors' Report* shall be received at the Ordinary Meeting in *February*, and that the Minutes of the Anniversary Meeting, and of every Special General Meeting, shall be confirmed at the next Ordinary Meeting after the day of such Anniversary or Special General Meeting. *Strangers* may be introduced to the Ordinary

Meetings, by any Fellow, with the leave of the President, Vice-President, or other Fellow presiding at the Meeting.

Business of Anniversary Meeting.

19. The business of the *Anniversary Meeting* shall be to elect the Officers of the Society, and to discuss questions on its rules and management. No Fellows or Honorary Members shall be proposed or admitted at the Anniversary Meeting. No Fellow shall moot any question on the rules or management of the Society at the Anniversary Meeting, unless after *three weeks' notice* thereof given to the Council, but amendments to any motion may be brought forward without notice, so that they relate to the same subject of motion. The Council shall give fourteen days' notice to every Fellow of all questions of which such notice shall have been given to them.

Special General Meetings.

20. The Council may, at any time, call a *Special General Meeting* of the Society when it appears to them necessary. Any ten Fellows may require a Special General Meeting to be called, by notice in writing signed by them, delivered to one of the Secretaries at an Ordinary Meeting, specifying the questions to be moved. The Council shall, within one week of such notice, appoint a day for such Special General Meeting, and shall give one week's notice of every Special General Meeting, and of the questions to be moved, to every Fellow within the limits of the metropolitan post, whose residence is known. No business shall be brought forward at any Special General Meeting other than that specified in the notice for the same.

Auditors.

21. At the *first Ordinary Meeting* of each year, the Fellows shall choose two *Auditors*, not of the Council, who, with one of the Council, chosen by the Council, shall audit the Treasurer's accounts, and report thereon to the Society, which report shall be presented at the Ordinary Meeting in February. The Auditors shall be empowered to examine into the particulars of all expenditure of the funds of the Society where they shall see occasion, and may report their opinion upon any part of it.

Duties of the President.

22. The *President* shall preside at all Meetings of the Society, Council, and Committees, which he shall attend, and in case of an equality of votes, shall have a second or casting vote. He shall sign all diplomas of admission of Honorary Members. He shall admit and expel Fellows and Honorary Members, according to the rules of the Society.

Duties of the Treasurer.

23. The *Treasurer* shall receive all moneys due to, and pay all moneys due from, the Society, and shall keep an account of his receipts and payments. No sum exceeding Ten Pounds shall be paid but by order of the Council, excepting always any lawful demand for rates or taxes. He shall invest the moneys of the Society in such manner as the Council shall from time to time direct.

Duties of the Secretaries.

24. The *Secretaries* shall, under the control of the Council, conduct the correspondence of the Society; they or one of them shall attend all Meetings of the Society and Council, and shall have the care of duly recording the Minutes of the Proceedings. They shall issue the requisite notices, and read such papers to the Society as the Council may direct.

Powers of the Vice-Presidents.

25. A *Vice-President*, whether Honorary or nominated, in the chair, shall act with the power of the President, in presiding and voting at any Meeting of the Society or Council, and in admitting Fellows; but no Vice-President shall be empowered to sign diplomas of admission of Honorary Members, or to expel Fellows. In the absence of the President and Vice-Presidents, any Fellow of the Society may be called upon, by the Fellows then present, to preside at an Ordinary Meeting. The Fellow so presiding may admit Fellows, but shall not be empowered to act otherwise as President, or Vice-President.

Powers of the Council.

26. The Council shall have control over the papers and funds of the Society, and may, as they shall see fit, direct the publication of papers and the expenditure of the funds, so, that they shall not at any time contract engagements on the part of the Society beyond the amount of the balance that would be at that time in the Treasurer's hands, if all pre-existing debts and liabilities had been satisfied.

27. The Council shall be empowered at any time to frame *Regulations* not inconsistent with these rules, which shall be, and remain in force until the next Anniversary Meeting at which they shall be either affirmed or annulled; but no Council shall have power to renew Regulations which have once been disapproved at an Anniversary Meeting.

28. No Dividend, Gift, Division, or Bonus in money shall be made by the Society, unto or between any of the Fellows or Members, except as hereinafter provided.

29. The Council shall publish a Journal of the Transactions of the Society, and such other Statistical Publications, as they may determine upon, and may from time to time pay such sums to Editors and their assistants, whether Fellows of the Society or not, as may be deemed advisable.

30. All communications to the Society are the property of the Society, unless the Council allow the right of property to be specially reserved by the Contributors.

REGULATIONS OF THE LIBRARY.

1. The Library is open daily from 10 a.m. till 5 p.m., except on Saturdays, when it closes at 2 p.m.; and it is entirely closed during the month of September.
2. Fellows of the Society are permitted to take out Books on making personal application, or by letter addressed to the Librarian.
3. Fellows are not to have more than two works at a time, nor keep any work longer than a month; but when a work is returned, it can be reborrowed by the same Fellow, provided it has not been bespaken in the interim by another Fellow.
4. Scientific Journals and Periodicals are not circulated until the volumes are completed and bound.
5. Cyclopædias and works of reference are not circulated.
6. Any Fellow damaging a work, either replaces the work, or pays a fine equivalent to its value.
7. Works taken from the shelves for reference, are *not* to be replaced, but must be laid on the Library table.
8. The Secretaries shall report to the Council any infringement of these regulations.

DONORS TO THE LIBRARY.

During the Year 1874.

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The Commonwealth of Massachusetts, U.S.A.
The Netherlands.
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Switzerland.
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The Colonial Governments of

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New Zealand.
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South Australia.
Tasmania.
Victoria.
Western Australia.
Mauritius.

The Registrars-General of

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Scotland.
The United States.
Victoria.

Public Departments.

The Admiralty.
„ Board of Trade.
„ Census Commissioners of England and Wales.
„ Census Commissioners of Ireland.
„ Foreign Office.
The India Office.
„ Inspectors of Factories.
„ Local Goverment Board.
„ Post Office.
„ Registrar of Friendly Societies.
„ Stationery Office.
„ Tithe Commissioners.
„ War Office.

Academy of Natural Sciences, Philadelphia, U. S. A.
Actuarial Society of Edinburgh.
Actuaries, The Institute of.
Agricultural Gazette of India.
Altona, Bureau der Statistischcs.
American Academy of Arts and Sciences, Boston, Massachusetts.
American Geographical Society of New York, U. S. A.
American Philosophical Society of Philadelphia, U. S. A.

During the Year 1874—*Contd.*

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Asiatic Society of Bengal.
Astor Library, New York, U. S. A.
Athenæum, The Editor of.
Austrian Consul-General, London.
Axon, W. E. A., Esq., F.S.S.

Bankers' Magazine, The Editor of, London.
Bankers' Magazine, The Editor of, New York, U.S.A.
Baynes, J. A., Esq.
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Bruxelles, Academie Royale de.
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Drach, S. M., Esq.
Dent, W. T., Esq., York.

East India Association.
Edinburgh, The Royal Society of.
Ellis, A. J., Esq., F R.S.
Engel, Dr. Ernest, Berlin.

Financial Reform Association.
Florence, Giunta Comunale de Statisticia.
Food Journal, The Editor of.
Franklin Institute, Philadelphia, U. S. A.
Giunta Communale di Statistica di Firenze.
Guy, Dr. William A., F.R.S.

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Howard Association.
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Hunt, Robert, Esq.

Ingall, W. T. F. M., Esq.
Indian Economist, The Editor of.
Insurance Record, The Editor of.

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Journal de Statistique Suisse, The Editor of.

Keleti, Chas., Esq., Budapest.
King's College, London.
Knight, Robert, Esq., Calcutta.
Kyshe, J. B., Esq., Mauritius.

Labourers' Friend, The Editor of.

During the Year 1874—*Contd.*

Leeds Public Library.
Liverpool, The Literary and Philosophical Society of.
Long, The Rev. J., of Calcutta.
Longman and Co., Messrs.
Lumley, W. G., Esq., Q.C.

Manchester, The Literary and Philosophical Society of.
Massachusetts, Board of State Charities.
Medical Record of New York, Publishers of.
Metropolitan Police Office.
Michie, Archibald, Esq., Q.C.
Minot, M. Eugène, Paris.
Monetary and Mining Gazette.
Mouat, Dr. Frederic J., F.R.C.S.

National Association for the Promotion of Social Science.
Nature, The Editor of.
New York State Library, U. S. A.

O'Donnell, John, Esq., Albany, New York, U. S. A.
Observatoire Bruxelles.

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Portuguese Legation.
Prague, Commission de Statistique.
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Redgrave, Alexander, Esq.
Review, The Editor of.
Revista de Portugal e Brazil, The Editors of.
Revue Bibliographique Universelle, The Editor of.
Royal Agricultural Society.
„ Asiatic Society.
„ College of Physicians.
„ Geographical Society.
„ Institution.
Royal Medical and Chirurgical Society.
„ Society of Victoria.
„ United Service Institution.
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Social Science, The Association for the Promotion of.
Society of Arts.
Society for Improving the Condition of the Labouring Classes.
Surtees Society.
Surveyors, The Institution of.

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Victoria Institute, London.

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By a resolution of the Council, dated 12th May, 1854, the price of back numbers of the *Journal* of the Society, charged to Fellows, was raised from one-half to three-fifths of the publishing price.

Note.—One or two numbers of the *Journal* are now out of print.

AN OUTLINE OF THE OBJECTS OF THE SOCIETY.

THE *Statistical Society* of London was founded, in pursuance of a recommendation of the British Association for the Advancement of Science, on the 15th of March, 1834, for the purpose of collecting, arranging, and publishing facts calculated to illustrate the position and prospects of Society, and especially facts which can be stated numerically and arranged in tables. The collection of new statistical materials, it was contemplated, would form only one part of the Society's labours; the condensation, arrangement, and publication of those already existing, whether unpublished, or published only in an expensive or diffuse form, or in foreign languages, being a work of almost equal usefulness.

It was also a prominent object of the Society to form a complete Statistical Library as rapidly as its funds would permit.

Such were the original aims and objects of the Society; and now that it is in the *fortieth* year of a prosperous existence, its Fellows have every reason to revert to them with satisfaction; for it is seldom that the first designs of a public association for the advancement of Science are carried out with a success so complete as has been achieved in this instance.

WHAT IT HAS DONE.—The Society now possesses a valuable library and a reading room; its ordinary meetings, held monthly from November to June, have cultivated among its Fellows an active spirit of investigation, and brought out the valuable results of much individual labour; its Quarterly *Journal*, in which the papers read before the Fellows are printed *in extenso*, with the discussions thereon, forms of itself a valuable library of reference.

The Society has originated and statistically conducted several inquiries on subjects of economic or social interest. The most recent work of the kind relates to the complicated question of local taxation in England. The instructive Prize Essays of Mr. R. H. Inglis Palgrave and Mr. Scott on that question will be found in the Society's *Journal* for 1871.

WHAT IT PROPOSES TO DO.—The present is deemed a favourable moment for reconsidering the scientific work of the Society, so far as it depends on the frequency and scope of its ordinary meetings, and the extent and character of its library and published Transactions.

At the recent International Statistical Congress in St. Petersburg, a permanent commission was appointed to watch over the progress of statistical research; so that the results of the deliberations which take place at those gatherings may, in their international aspects, be as far as possible utilised during the interval of consecutive meetings. To that important work the Fellows and Members of this Society can afford material aid.

In order that the Society may extend its sphere of useful activity, and accomplish the various ends indicated, an increase in its numbers and revenue is most desirable.

Should that increase be realised, the Society might become a Publishing Society for Standard Works on Statistical Science out of print or scarce; and could gather together a complete collection of the best statistical authorities in

English, French, German, and Italian. A well-arranged library of reference of the kind projected does not at present exist in England.

A change in the character and contents of the *Journal* is under consideration, with the object of making it a still more useful and authentic storehouse of statistical facts of interest and importance, useful alike to all engaged in legislation, in local government, and in the many active movements which pre-eminently distinguish this country.

The Society consists of Fellows and of Honorary Members. The principal States of Europe and America, British India and the Crown Colonies, are represented by the "Honorary Members." The organisation of the Society has from its inception been purposely cosmopolitan, and it carefully cultivates a connection with the several local societies of the Empire, and a correspondence with those of Foreign Countries.

Fellows elected in or after the month of June are exempt from paying their subscription for the current year. The *Journal* of the Society, published quarterly, is distributed gratuitously to all the Fellows; its Library is one of circulation; and its Rooms and its Monthly Meetings are of great resort.

Proposal Papers and any furthur information will be forwarded, on application, by the Assistant Secretary.

THE HOWARD MEDAL.

In the year 1873, the centenary of the appointment of John Howard as High Sheriff of the county of Bedford, the Council of the Statistical Society gave effect to the suggestions of the President, Dr. Guy, F.R.S., by founding a Medal under the above title, in recognition of Howard's claim to be considered at least as much a Statist as a Philanthropist. This Medal is to be given every year to the author of the best essay on some subject in social statistics, giving a preference to those in which Howard himself was most interested. The subject of the essay for which the Medal will be awarded in 1875, is:—

> "The state of the Dwellings of the Poor in the Rural "Districts of England, with special regard to the Improvements that have taken place since the middle of the "eighteenth century; and their Influence on the Health and "Morals of the Inmates."

N.B.—Candidates for the Howard Prize of 1875 will be expected to give some account of John Howard's Cottage-building at Cardington, near Bedford; and will be allowed to illustrate, by Plans and Elevations, the arrangements which they deem best adapted to preserve the health and morals of the poor—such Plans not to fill more than two pages of the Society's *Journal*.

Further particulars or explanations may be obtained from the Assistant Secretary, at the rooms of the Statistical Society, Somerset House Terrace, Strand, London, W.C. (King's College Entrance).

SESSION 1874-75.

MONTHLY MEETINGS,

THIRD TUESDAY IN THE MONTHS OF NOVEMBER—JUNE.

Tuesday,	November 17.	Tuesday,	March 16.
„	December 15.	„	April 20.
„	January 19.	„	May 18.
„	February 16.	„	June 15.

The Chair will be taken at 7·45 o'clock p.m., precisely.

The Council have reason to expect that in the course of the Session the following Papers will, among others, be communicated to the Society:—

The PRESIDENT.—Opening Address of the Session.

Mr. N. A. HUMPHREYS.—"The value of Death-Rates as a Test of Sanitary Condition."

Rev. DAWSON BURNS, M.A.—"The Consumption of Intoxicating Liquors as affected at various periods by the Rates of Duty Imposed upon them."

Mr. CHARLES GATLIFF.—"On Improved Dwellings and their Beneficial Effect on Health and Morals, with Suggestions for their Extension."

Mr. E. CHADWICK, C.B.—"On the Methods of Taking Statistics for Sanitary and Economical Purposes."

Mr. T. BRIGGS.—"Universal Free Trade the First Condition of Universal Peace." *A reply to Mr. Leone Levi's last Paper on Taxation.*

Dr. FARR, F.R.S.—"On the Valuation of Railways, Mines, Telegraphs, and other Commercial Concerns, with Prospective, Deferred, Increasing, Decreasing, or Terminating Profits."

Mr. E. W. BRABROOK, F.S.A.—"On Friendly Societies and similar Institutions."

Mr. P. M. TAIT.—"On the Theory and Practice of Accident Assurance."

Dr. F. J. MOUAT, F.R.C.S.—"Prison Statistics: Industry and Discipline of Lower Bengal." (*Concluding Paper.*)

Visitors may attend the Monthly Meetings on the introduction of a Fellow

THE GENERAL ANNIVERSARY MEETING

WILL BE HELD ON

TUESDAY, the 29th of June, 1875, at Three p.m.

THOSE persons who are inclined to benefit the Society by legacies are recommended to adopt the following

FORM OF BEQUEST.

I give and bequeath unto the Statistical Society of London, the sum of £   , such legacy to be paid out of such part of my personal estate, not specifically bequeathed, as the law permits to be appropriated by will to such a purpose.

NOTE A.—All gifts by will to the Society of land, or of money secured on, or directed to be secured on, or to arise from the sale of, or directed to be laid out in the purchase of, land, will be void. Gifts may be made by will of stock in the public funds, shares or debentures of railway or other joint-stock companies, or money to be paid out of the testator's pure personal estate, or of personal chattels.

NOTE B.—Bequests may be made either for the general purposes of the Society, or to the Society's "Building Fund," which has been recently established.

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